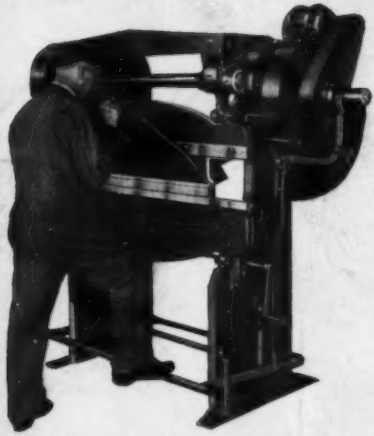
Hitchcock's Machine Tool Blue Book

APRIL, 1934 TWENTY-NINTH YEAR

A New Powerful Small Press



Costs Less Than One-half of other Machines of Similar Capacity !

HERE is a rugged, compact, 48", 14 ga. steel press brake, the weight of which is 1-3 to 1-5 that of other machines of similar capacity. ¾ h. p. motor, "V" belt drive and starting switch are standard equipment. This machine is used by General Motors, Westinghouse, International Harvester, R. C. A., etc.

Send for Circular No. 253, describing Press and Attachments

DREIS & KRUMP MFG. CO.

7440 LOOMIS BLVD., CHICAGO, ILLINOIS

PUBLISHED AT 508 So. DEARBORN ST. CHICAGO

SUNDSTRAND BALANCING TOOLS

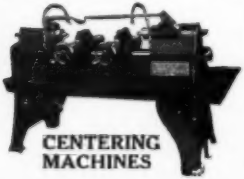
Save time and money. Anti-friction discs; strong, well made, economical. Range in size from No. 1 Bench, with capacity for 800 lbs., to No. 5 Extra Heavy, with capacity for 24,000 lbs. Others available for balancing airplane propellers, balancing and drilling flywheels, pulleys, etc.

Get details.

SUNDSTRAND MACHINE TOOL CO. · ROCKFORD, ILLINOIS, U.S.A. ·

BENCH CENTERS

No. 56 illustrated, others available. Fast, accurate, an operation saver, a mighty profitable investment.



CENTERING MACHINES

Accurate, compact, portable. Adjustable heads, Quick-acting spindle. Seven sizes.

These Sundstrand tools, like our Lathes and Milling Machines, cut costs and make work easier. . . . INVESTIGATE! Address our Dept. H for details.

THE SWORN FACTS

On Circulations and Costs

The following table is compiled from the March, 1934, issue of "Standard Rate & Data Service." The circulation figures are sworn to by the publishers, covering a six months average.

	Circulation	Page rate on annual order	Cost per page per 1,000
Machinery	14,034	$145	$10.33
American Machinist	15,164	$135	8.91
Modern Machine Shop	23,654	$100	4.23
Hitchcock's Blue Book	**20,149**	**$ 40**	**1.98**

Only $1.98 a page per 1,000 in Hitchcock's

$4.23 a page per 1,000 in nearest competitor

Advertisers will note from the above that in the BLUE BOOK it costs them only $1.98 a page per 1,000 to effectively cover over 20,000 responsible buyers, compared with $4.23 for its nearest competitor.

Approximately 50% of its circulation is confined to plants rated $50,000 to a million and over. In hundreds of the larger plants the BLUE BOOK is addressed individually to mechanical and purchasing officials whose names are furnished by the companies themselves.

It is doubtful if better advertising than that furnished by Hitchcock's BLUE BOOK can be secured at any price. In its practical service for the cost it is in a class by itself.

The handy size of the BLUE BOOK is popular with buyers. It enables them to keep it within easy reach for ready reference.

"I have been surprised to find to what extent they keep the BLUE BOOK in the pocket or about the desk or even in some near-by cubby hole," reports an independent observer, "while often no other paper is near at hand."

That is one reason for the exceptional pulling power of the BLUE BOOK, which more than compensates for the larger page.

A neat ad in the hand is worth more than a larger display that is either mislaid or off somewhere in the files.

Hitchcock's
Machine Tool Blue Book

Selected Circulation **20,000 Monthly**

APRIL, 1934 TWENTY-NINTH YEAR

Our Pledge to Advertisers

We pledge ourselves to maintain our full published circulation.

We pledge ourselves to distribute that circulation to the best of our ability where it will most benefit our advertisers.

WE PLEDGE OURSELVES to concentrate most of our circulation in the industrial plants of substantial rating, so that anything from the smaller equipment to the largest machine tools may be advertised in the "Blue Book" to equally good advantage.

We pledge ourselves to use every effort to give the utmost of advertising value for every dollar expended. This applies to the advertising of anything which goes into the machine shop, irrespective of size or cost.

NRA MEMBER U.S. WE DO OUR PART

Published By

Hitchcock Publishing Co.

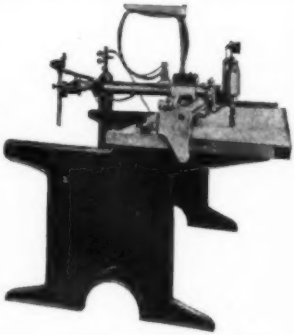
508 S. Dearborn St., Chicago, Ill.

Consult the Classified Finding Index for your requirements

The HANCOCK OXYCOP Reduces Your Cutting Costs

Here's How!

Speedy Cutting
Economical Operation
Low Upkeep
Accurate Cutting
Wide Range
Uses City Gas
Easy to Operate
Pays for Itself
in Very Short Time



Every Tool Room Can Use It

DIES, jigs, fixtures, etc., usually drilled and finished on a shaper can be done with the Simplex Oxycop in a few minutes—instead of hours. Actual time studies show that jobs done by conventional methods and requiring 85 hours to complete were cut on the Oxycop in ***less than 6 hours.*** Cuts when completed are clean and smooth, unless a finished surface is desired, no machining is necessary. Steel cut this way does not carbonize.

Investigate This Fast, Economical Method

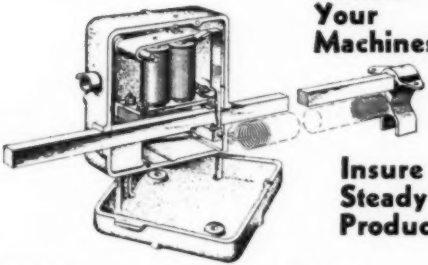
The Hancock Simplex Type Oxycop is made in three sizes. The No. 1—illustrated above—has a cutting capacity of 24"x18"; No. 2, 36"x24" and No. 3, 60"x40". Nos. 1 and 2 can be furnished either as standard or universal machines. Full instructions are given with each machine. If you are interested in materially reducing your tool room costs it will pay you well to investigate the Hancock Oxycop.

Write for Illustrated Catalog Giving Complete Information, Including Interesting Tables of Cutting Time.

BRADLEY MACHINERY CO.
6500 Epworth Blvd., Detroit, Mich.

Simplex Safety Stops

Protect Your Machines



Insure Steady Production

NEW! **Model E**
At half the cost of previous models

Protect any number of danger points at the cost of one mechanical stop.

Avoid experiments. Avoid designing expense. Avoid disappointments.

24 years experience in this one line at your disposal.

In use for years on machinery for:	*Guards against:*
Book Binding	**Any Irregularity**
Packaging	**Out of Tolerance**
Bottling	**End of Work**
Textile Spinning	**Jams**
Blanking & Forming	**Mis-Feeds**
Etc., Etc., Etc.	**Etc., Etc., Etc.**

No interference with machine's normal operation.

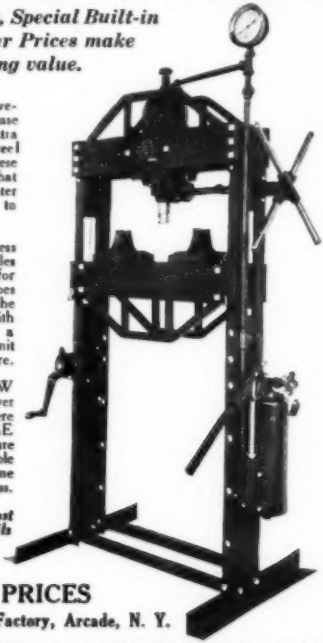
Rugged. Simple. Powerful. Completely equipped with knock-off bar, cross link and spring. Operated from lighting circuit.

Send today for prices and booklet illustrating many applications, wiring diagrams, methods of mounting, etc.

THE ATLANTIC COMPANY
CHAPPAQUA, -:- -:- N. Y.

KRW Hydraulic and Sensitive ARBOR PRESSES

New Improvements, Special Built-in Features and Lower Prices make them an outstanding value.



THE last word in convenience, efficiency and ease of operation. Built extra strong and well braced, with steel trusses electrically welded, these presses will withstand strains that would cause presses of lighter and inferior construction to buckle or collapse.

Hand wheel for sensitive press operations has sliding handles which pull out to the ends for increased leverage. Work does not have to be changed from the work table as is the case with other make presses having a separate sensitive press unit mounted on the side or elsewhere.

The importance of this KRW feature as a time and labor saver can be appreciated. Also there is NO EXTRA CHARGE for this important built-in feature on a KRW Press. Work table can be raised easily with one hand. A strictly one-man Press.

Write for special circular, just off the press, giving full details and specifications of all KRW Arbor Presses.

PRICES

F. O. B. Factory, Arcade, N. Y.

No. 37—35 ton Hydraulic and Sensitive Arbor Press (hand operated)	$128.00
No. 37B—35 ton Hydraulic and Sensitive Arbor Press (air-oil operated)	128.00
No. 37E—50 ton Hydraulic and Sensitive Arbor Press (hand operated)	150.00
(Can also be furnished in air-oil operated at same price)	
No. 37F—70 ton Hydraulic and Sensitive Arbor Press (hand oper. only)	275.00

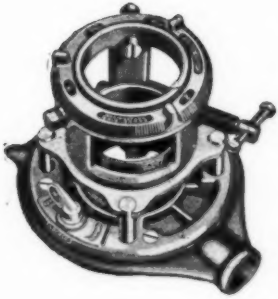
Gauge and fittings, $15.00 extra on all presses.

K. R. WILSON

10-16 Lock Street, Buffalo, N. Y., U. S. A.

EXPORT DEPARTMENT
90 West St., New York, N. Y.

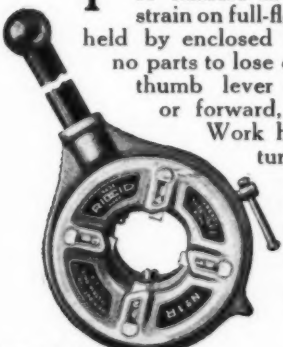
WEST COAST BRANCH
722 Mateo St., Los Angeles



A NEW POSTER THREADER

with a lot of RIDGID Improvements you'll like

POWER direct from handle to head to chasers in a straight line. No strain on full-floating posts. Chasers held by enclosed ball-and-coil spring; no parts to lose or break off. Ratchet thumb lever snaps into reverse or forward, locks for solid die. Work holder sets to size by turn of gauge ring, then put on pipe—tighten with ONE screw. Chasers interchangeable. Weighs only 12 lbs.—but rugged throughout. A remarkable tool.



New RIDGID
Poster Threader
No. 1R, for 1", 1¼", 1½" and 2" pipe, separate chasers for each size.

Write for folder or ask your Jobber

The Ridge Tool Co., Elyria, O., U. S. A.

RIDGID

PIPE WRENCHES, CUTTERS, VISES, THREADERS

William R. Wallis

We regret to announce the death of William R. Wallis, formerly Vice President of the Hitchcock Publishing Co., which occurred at Atlantic City, N. J., March 27th. He had been ill two months.

Mr. Wallis was a man of more than ordinary ability, with a most pleasing personality. "Billy Wallis," as they called him, will be missed by his many friends in the machine tool trade.

Funeral services were held at Atlant c City on Thursday, March 29th. The interment took place on Friday at Louisville, Kentucky.

This Publication

Over 29 years ago this publication began advertising the products of reliable manufacturers to the metal-working trade. It is mailed regularly each month to every worthwhile prospective buyer of machinery, equipment, supplies and services in the industry. In the 28 years it has been published, millions of dollars worth of merchandise has been purchased by its readers.

Those who receive this publication regularly read it and respond to its advertising messages. Thousands of plants use it as a buying guide. We believe we sell more products per dollar of advertising than you can obtain in any other way. It is precisely the one medium that can produce profitable results for its advertisers at a reasonable cost.

Rates, circulation and other data on request

Hitchcock Publishing Co.

508 So. Dearborn St., Chicago, Ill.

High Speed Production

—a fully automatic production machine

A MARVEL Automatic Hack Saw will do the work of several ordinary saws and men, for it feeds, measures, cuts and counts automatically. Set it and forget it. It will run off the required number of measured lengths and stop. Here at last is a fast, reliable tool that will really reduce cutting-off costs. Full ball bearing construction, 4-speed transmission, dual feeds, accurate. With the unbreakable **MARVEL** High-Speed-Edge Blades it assures uninterrupted production and big savings of time, labor, and materials.

Write for Catalog Sheets

Armstrong-Blum Mfg. Co.

"The Hack Saw People"

341 N. Francisco Ave., CHICAGO, U. S. A.

TWO SIZES
No. 6A, Capacity: 6"x6"
No. 9A, Capacity: 9"x9"

WELDING MACHINES

½ TO 100 K.V. A.

FOOT OPERATED MOTOR DRIVEN

For Welding Metals Having a Combined Thickness from .001 in. to .500 in.

WELDERS

As Low As

$35.00

MADE IN 12 SIZES

EISLER ENGINEERING CO., Inc.

746 So. 13th St., NEWARK, N. J.

Distributor and Dealer Connections Desired

Going to CINCINNATI?

"On Famous Fountain Square"

THE GIBSON WELCOMES YOU TO CINCINNATI

One thousand rooms, each with bath. 70% of all rooms at $2.50, $3, $3.50 and $4. Five famous restaurants: Florentine Room, Roof Garden, Tea Room, Coffee Shop, and Sandwich Grill. Garage Door Service. Best location in city. Cincinnati's convention headquarters.

HAZEN J. TITUS, Manager.

HOTEL GIBSON

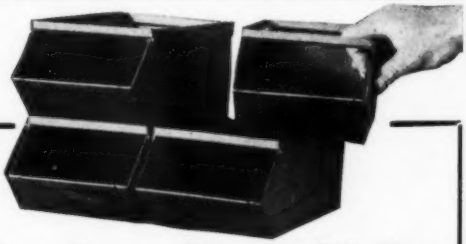
CINCINNATI

Acme Standardized Drill Jig Bushings

Acme Drill Jig Bushings are a standardized product, carried in stock for prompt delivery in over 6,700 standard items. They are completely finished and ready for use. The Bushings are made by the most exacting scientific methods, which insures long wear, accurate fit and absolute satisfaction. Special sizes made to order.

Send for our Bulletin, which gives complete details, sizes available, and low prices.

ACME INDUSTRIAL CO.
419 N. Carpenter St., Chicago



Save Space, Time and Labor

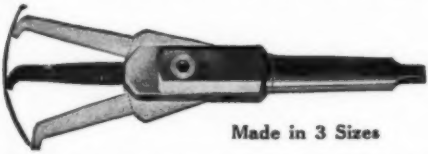
Cut handling costs—eliminate waste motions—save time with Stackbins.

The contents of each individual Stackbin are always accessible without disturbing the bins above or below.

Write for Illustrated Circular

STACKBIN CORPORATION
PROVIDENCE, R. I.

E-Z
SET BORING TOOL



Made in 3 Sizes

WHEN BORING, YOU NEED AN E-Z SET

Can't say much here; a sample tool will tell you a lot! ORDER ONE. Let it talk for itself. If returned within ten days, full credit allowed, no questions asked.

F. A. MAXWELL COMPANY

8444 Broadway, Cleveland, Ohio.

ARMSTRONG

TRADE MARK REG. IN U.S. PAT. OFFICE

Threading Tool

Threads are certain to fit

With the ARMSTRONG Threading Tool anyone can cut perfectly fitting threads for ARMSTRONG high speed steel form cutters always retain their true shape—require only flat top grinding to re-sharpen. There are ARMSTRONG TOOL HOLDERS that cut cutting-costs on every operation on lathes, planers, slotters and shapers—that "Save All Forging, 70% Grinding and 90% High Speed Steel."

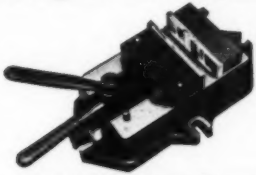
Write for Catalog

ARMSTRONG BROS. TOOL CO.

"The Tool Holder People"

308 N. Francisco Av., CHICAGO, U. S. A.

Designed for Modern Production Needs!



Hartford Milling Vise

Quick Opening—Tremendous Binding Power

Modern production milling work demands efficient aids. Thus, when the old type screw vise proved inadequate—a time and money waster—a large New England manufacturer developed the Hartford Milling Vise which affords the utmost in dependability, efficiency and economy. Its lower cam-faced handle gives you quick-opening and return, and the top eccentric lever handle exerts tremendous binding force. With little practice, both levers can be locked or unlocked with one hand.

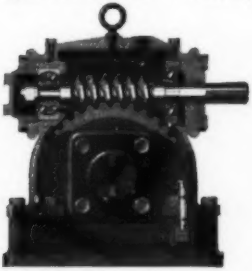
Write for Complete Information.

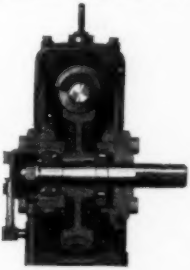
We also Build Machinery on a Contract Basis and Design and Develop Special Automatic Machinery—Gears Cut to Order.

Hartford Special Machinery Co., 285 Homestead Ave., HARTFORD, CONN.

WORM REDUCERS

Top or Bottom Worm. Ratios: 4⅚—1 to 100—1. ½ to 98 H.P.





Abart Gear and Machine Co.

4832 W. 16th St., Cicero, Ill.

We also Manufacture Gears of all Types and Materials.

The "BUTTERFLY"

Filing and Die Making Machine

Saves 50% cost in sawing, filing and lapping on dies, gauges, tools, etc., up to 1" thick

In highest possible quality of material, precision of machining and nicety of adjustments, the "BUTTERFLY" Filing Machine is as painstaking a product as the finest watch movement—*and just as reliable.*

Noiseless in Operation!

Made in its entirety under the direct personal supervision and exacting standards of the well recognized and able engineer, Leonard Markels.

The spirit of craftsmanship that makes every Harvey Product supremely dependable is carried out to the minutest detail in the manufacturing and assembling. All parts are interchangeable.

Write for Details

Harvey Mfg. Corp.
210 Centre St.,
NEW YORK, N. Y.

A PRECISION MICROMETER FOR $1.50

Size 0 to 1"

Guaranteed to be absolutely accurate. Money refunded if not satisfactory.

Other sizes priced in proportion.

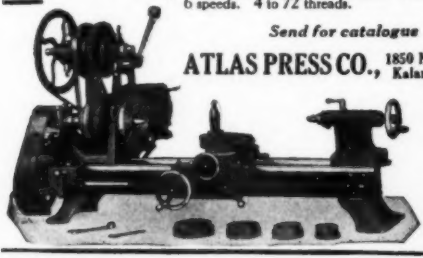
Send Money Order or Check. Include ten cents to cover postage.

BRADLEY MACHINERY CO.
6500 Epworth Blvd., Detroit, Mich.

ATLAS 9"
Bench Lathe
$79 cash
as shown, less motor
with motor $89

SMALL INVESTMENT
QUICK PROFITS

A very small investment in this power-saving lathe will quickly show you profits. Many shops have paid for their ATLAS equipment in 6 to 9 months. Does your small work with tool-room accuracy. Each ATLAS running tested for .001" accuracy. Self contained countershaft, no outside shafting or pulleys. V-belt drive. Run by ¼ h. p. motor. 9" swing, 18" between centers; also larger sizes. Compound rest, hollow spindle, automatic, reversible feeds. 6 speeds. 4 to 72 threads.



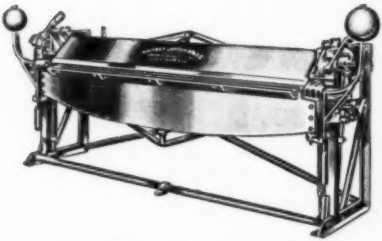
Send for catalogue

ATLAS PRESS CO., 1850 N. Pitcher St., Kalamazoo, Mich.

10 Months Terms if you wish

Whitney - Jensen BRAKE

Capacity 16 Gauge and Lighter



Can be changed into box or pan brake in 10 or 15 minutes, making it a dual machine.

Bends opposite from any other machine.

Stationary platen makes very square corners possible.

Send for Our Catalog and Complete Information

WHITNEY METAL TOOL COMPANY
95 FORBES ST., ROCKFORD, ILL.

STANDARDIZATION PAYS

UP TO

ONE HUNDRED HORSEPOWER

FROM STOCK!

Send for Catalog of Silent and Roller Types

BOSTON GEAR WORKS, INC.

DEPT. HMT, NORTH QUINCY, MASS.

BOSTON NEW YORK PHILADELPHIA CLEVELAND CHICAGO

BOSTON GEARS

TAPPING

PERFECT HOLES AT 3000 R. P. M.

WITH THE NEW

"PROCUNIER"

BALL BEARING

TAPPING ATTACHMENT

FRICTION DRIVE At Spindle Speed

CAPACITY:

Size No. 1 { Brass 1/4" Steel 7/16"

Size No. 2 { Brass 1/2" Steel 7/16"

Also other sizes and styles

FRICTION REVERSE At Twice Spindle Speed

Write for our catalog with prices

PROCUNIER SAFETY CHUCK CO.

14 S. Clinton St., Chicago, Ill.

Send Us Your Inquiries

We are always glad to forward a memo of any machinery or equipment for which you are in the market to all of our advertisers without charge.

The Blank Form

printed on the other side of this page is for this purpose, and you are free to make use of it without obligation.

It has been the means of bringing many buyers and sellers together, to their mutual profit and satisfaction.

Mail your needs to

HITCHCOCK PUBLISHING CO.

508 S. Dearborn St., Chicago

FREE BUYERS' SERVICE

To All of Our Readers

If you will list below the new or used metal-working machines or machine shop equipment for which you are in the market, and mail it to us, we shall be glad to broadcast it to all of our advertisers. Replies will come from them, not from us.

But if you prefer that we put you in direct touch with the manufacturers of any particular machine tool or other metal-working equipment, let us know and we will endeavor to locate them for you.

Name .....

Address .....

We are in the market for .....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

Mail to Hitchcock Publishing Co., 508 So. Dearborn St., Chicago, Ill.

Improved Thompson Universal Grinder

Self-contained and motor driven, this standard Grinder combines efficient means for the rapid and accurate production of every grinding operation required in a machine shop.

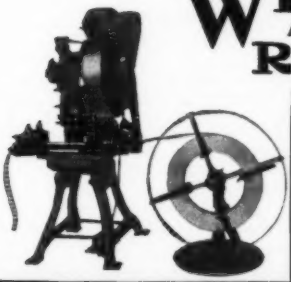
All standard machines equipped with auxiliary independent coarse cross feed for surface grinding.

Capacity 12"x36"

The Thompson Grinder Co.

1534 West Main St., SPRINGFIELD, OHIO

WITTEK
AUTOMATIC
Roll Feeds



FOR PUNCH PRESSES

Will feed from 0" to 30" per stroke. Fits any size or make of press.

Fast
Accurate
Automatic

Low in first cost. No upkeep. Built with or without straightener to meet all feeding conditions.

Write for Bulletin FH and free trial offer.

WITTEK MFG. CO.
4305 W. 24TH PL. CHICAGO, ILL.

"ALNOR" Pyrometers

for the Hardening Furnace

MODEL 223

Inexpensive, yet accurate and durable, the ALNOR Pyrometer is used by large and small shops everywhere for heat-treating work. Because of its low first cost and compact size it is also very popular for soft metal melting, galvanizing, die casting, japanning, enameling, measuring flue gas temperatures and many other purposes.

Case diam. 4½ in.

Scale length 3½ in.

$40

With 10 ft. Alloy Wire connector block and a No. 8 gauge insulated thermo couple 24" long without protection tube

Write for descriptive folder

Illinois Testing Laboratories, Inc.
150 W. Austin Ave., Chicago, Ill.

BETTER-MADE DIE SETS

BAUMBACH

AT LOWER COST

24 DIFFERENT STYLES

OVER 95,000 SIZES

STANDARDIZED DIE SETS

Semi-Steel

Drop Forged Steel

Send For Our New 208 Page Catalog

E. A. BAUMBACH MFG. CO.
1810 South Kilbourn Ave., CHICAGO, ILLINOIS

Abolish Expensive Hand Finishing

with a

Simplex-M Abrasive Band Grinder

This Grinder accelerates production and cuts costs. Hand emerying or filing operations are antiquated in comparison. The use of this new modern machine assures straight grain finishes with sharp edges. *Details of this and other styles and sizes on request.*

WALLS SALES CORP., 96 Warren Street NEW YORK

Gem Drill Press

Made In 3-sizes Up To 10½"

Vise

Milling Machine

Vise

Jaws open 6¾"

Plain & Swivel Base Vise

J. E. Martin Tool & Die Works

528 W. State St., SPRINGFIELD, OHIO

BURKE

Milling Machine

This milling machine is designed to speed up and economize the milling of work too small to be profitably handled on larger millers.

It is one of a line of five millers that are fast, accurate and dependable.

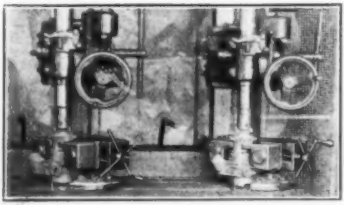
No. 3 Hand Feed Milling Machine *Write for Circulars*

The Burke Machine Tool Co., 297 E. 16th St., Conneaut, Ohio

"JOHN'S" Universal Drill Jigs

One Firm Uses 115

Read What THEY Say



Made in 6", 8" & 14" Sizes

Boring Cylinders on 14" Jig

"More Accurate Work—Saves Tooling Cost"

"Pleased to say that we have approximately 115 "JOHN'S" UNIVERSAL DRILL JIGS in operation in various departments. We have found these jigs very satisfactory for drilling, milling, grinding, assembling and other operations and have proven to increase our production, given us more accurate work, and ***saved us considerable tooling cost.***"

Write for Illustrated Folder giving Complete Details

HEUSER MFG. CO., 1638 No. Paulina St., CHICAGO, ILL.

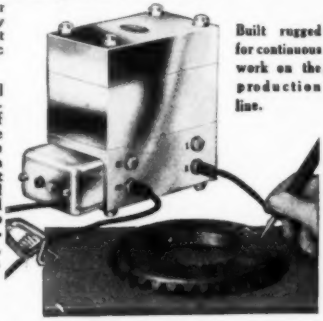
For Light and Heavy Etching

With 24 Stages of Control.

The LUMA Master Etchtool fulfills every marking requirement that can be done by an electric Etching outfit.

A Production Tool with as many as 24 different stages or varieties of control for regulating the depth of marking, this tool can be used for extra light marking of machinest scales, micrometers and fine tools or can be used or ***extra heavy and deep*** marking of rough and unfinished iron, cast iron, forgings, steel plates, etc.

Send for circular giving complete data and details of this modern Instrument.



Built rugged for continuous work on the production line.

LUMA ELECTRIC EQUIPMENT CO.
DEPT. H.—Main P. O. Box No. 132—TOLEDO, OHIO

The Grant NOISELESS RIVET Spinning Machine

the PIONEER of its type—built and constantly improved over a period of more than twenty-five years—produces highly polished heads, without hammer or tool marks, at a rate of a RIVET a SECOND.

Also built in Vertical and Horizontal Multiple Spindle Types.

Send us samples and be convinced of its superior qualities.

For work in hard-to-get-at-places, we build Hammer type Machines.

Write for Literature—and don't forget to send that sample!

The Grant Mfg. & Machine Co.
C. E. Station, Bridgeport, Conn.

Nicholson Expanding Mandrels

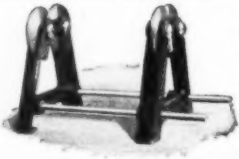
THEY are usually known among mechanics as lathe mandrels, but they work equally as well on millers or grinders. They also will take a job with a square hole as well as a round one.

Write Us for Further Information

W. H. Nicholson & Co.
117 Oregon St., Wilkes-Barre, Pa.

Anderson Ever Ready Balancing Ways

Exceedingly Sensitive



Easy to Manipulate

Made in six sizes to balance anything that revolves from a crank shaft to a 24,000 lb. turbine rotar. They require no special leveling, no adjustment, and no centers.

Equipped with glass-hard spindles, chilled steel discs, and especially sensitive ball bearings, to give accurate, long time service.

"Swing"	20"	40"	60"	72"	96"	72"
Greatest distance bet. standards	20"	30"	30"	66"	88"	20'
Capacity in lbs.	1000	2000	2000	5000	10000	24000
Approx. shipping weight	45	90	150	350	650	
Code	Bead	Bid	Bis	Bib	Ben	

Anderson Bros. Mfg. Co.
1915 Kishwaukee St., Rockford, Ill.

VISE

A good one for Driller, Miller, Shaper, or Planer.

6", 9" and 12" Jaws

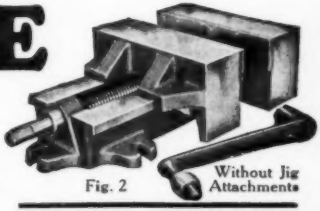


Fig. 2

Without Jig Attachments

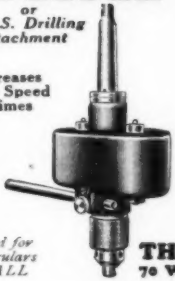
— DRILL —

SPEEDER

or

H. S. Drilling Attachment

Increases the Speed 3 Times



KNURL HOLDER

for Turret Lathe

Adjustable to any size within capacity.

Swivel Lugs

Shank to suit Turret

Send for Circulars of ALL

THE GRAHAM MFG. CO.

70 Willard Ave., PROVIDENCE, R. I.

City Machine & Tool Works Expands

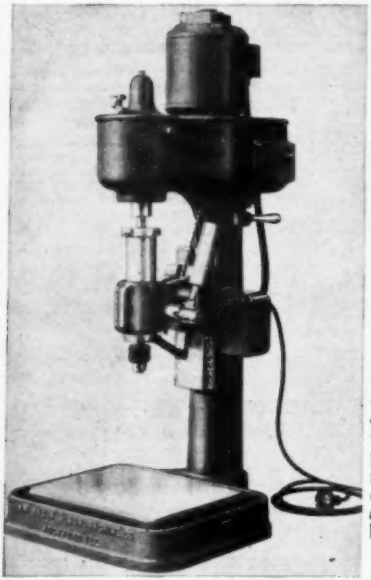
City Machine and Tool Works, Dayton, Ohio have acquired The Paulins Tool and Engineering Company, Detroit, Mich., manufacturers of the the Paulins Standard Drill Jigs and Standard Locks, and are now manufacturing an improved line of Standard Drill Jigs and Standard Locks under the trade name of Cimatool-Paulins.

All sizes in both the positive lock and spring type jigs will be continued and several new styles and sizes have been added to give greater size range and more adaptability.

Stocks will be maintained both at the factory in Dayton and at the Detroit Office, 410 Stormfeltz-Loveley Building, 7310 Woodward Avenue. Frank U. Paulins remains with the Detroit office in an engineering and sales capacity.

The addition of these new products enables City Machine and Tool Works to offer a complete tooling service and also affords better manufacturing facilities and wider distribution of this well known line of standard drill jigs and locks.

Redin No. 100 Sensitive Drilling Machine



A. W. Redin & Son Machine Co. 1842 Eighteenth Ave., Rockford, Ill., are offering a new machine for which they claim great drilling economy.

They have incorporated in the drill a four-speed rolling wedge transmission, which is said to be as powerful as a gear drive, yet is amoother running than a belt. It is easy on bearings, because there is no vibration, and pressure is automatically adjusted to the resistance of the work being done.

It is a combination of rigid design and high class workmanship and materials. The Redin No. 100 is equally good on high speed production work and the most exacting tool room jobs.

HOW

—can our advertisers know that your inquiry comes from Hitchcock's Machine Tool Blue Book unless you tell them? When writing them, won't you kindly say just where you saw their ad? Thank you!

Strand
FLEXIBLE SHAFTS

Flexible Shafts
AND EQUIPMENTS

for Grinding, Polishing, Sanding, Drilling, Lathe grinding, Screw-driving, Nut-setting and many other operations. Horizontal and vertical types. Quality machines for all industries.

New Catalog No. 26
Write for copy

Originators and Manufacturers

N. A. STRAND & CO.
5001 N. Lincoln St. Chicago, U. S. A.

Why Waste Time On Broken Taps ?

Every minute spent by your high-priced mechanics in digging out broken taps is a dead loss. When a tap breaks it should be ***removed quickly with***

The Walton Tap Extractor

This handy tool has steel fingers which back out the tap ***without injuring the threads.*** It will save you many hours in the course of a year—paying for itself over and over again. Made in three and four-flute styles.

Try One in YOUR SHOP—
Sent on 60-day Trial Basis

The Walton Company

302 Pearl St., Hartford, Conn.

HAND-EE

HAND-EE GRINDER PRICES

Model B—Hand-ee Hi-Power Grinder complete with 3 wheels (shapes as specified) in special container with wrenches and dressing stone ONLY $35.00, f. o. b. CHICAGO. (Also for 220 or other current $38.50).

Smaller Size Model A—Hand-ee. Weighs only 1 pound. Universal motor. Speed 13,000 R. P. M. without load. Complete with 3 wheels ONLY $11.50 postpaid in U. S. A.

Ask your supply house for a demonstration of Hand-ee Grinders, or accept our 5-Day trial offer by sending the coupon.

CHICAGO WHEEL & MFG. COMPANY

Grinding Wheel Engineers Since 1895 116 S. Aberdeen St., Chicago, Ill.

Solves

● Grinding Problems
● Cuts Production Costs
● Speeds Up Work

A definite upping in material and labor costs is confronting most producers today The question is—***Where can costs be cut?*** The answer is—***Hand-ee Grinders*** with ***Chicago Wheels on Shanks.*** Large and small industries are finding Hand-ee Grinders the most useful tools, that have come into their shops in many years. They handle a wide range of work. New and inexperienced help find them easy to use and quickly become expert. They save time as workers take Hand-ees right to the job. Lost motion is greatly reduced when Hand-ees come into the shop.

"Chicago" Grinding Wheels, Mounted on Steel Shanks, in More Than 100 Shapes

Every grinding need is efficiently handled with the wide range of shapes in all abrasives available. Permanent mounting on steel shanks is a big feature offered in Chicago Wheels. They are quickly slipped into the chuck of the Grinder and ready to go. No clumsy collars, no screws or nuts to adjust. Here's new ease and speed in production operations—in pattern, die and mold making—in sharpening taps, dies and other tools—in grinding hard-to-get-at places.

CHICAGO WHEELS ON SHANKS

CHICAGO WHEEL & MFG. COMPANY, 116 S. Aberdeen St., CHICAGO, ILL.

Send prepaid on your 5-day trial offer—

☐ One Hand-ee Model B Grinder with 3 wheel shapes checked above $35.00 f. o. b. Chicago
☐ One Hand-ee Model A Grinder with 3 wheel shapes checked, $11.50 postpaid in U. S. A.
☐ Send Free Booklet. ☐ Check Enclosed. ☐ Send C. O. D.

Classified Finding Index

Arbor Presses
Atlas Press Co., Kalamazoo, Mich.
Wilson K. R., Buffalo, N. Y.

Arbors, Solid
W. H. Nicholson & Co., Wilkes-Barre, Pa.

Balancing Ways
Anderson Bros. Mfg. Co., Rockford, Ill.
Sundstrand Machine Tool Co., Rockford, Ill.

Band Saw Machines, for Metal
Armstrong-Blum Mfg. Co., 341 N. Francisco Av., Chicago

Bearings, Ball
Boston Gear Works, Inc., North Quincy, Mass.

Bending Machines, Hand and Power
Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago
Lewthwaite Mchs. Co., T.H. 311E. 47th., N.Y.

Bins
Stackbin Corp., Providence, R. I.

Bolt and Nut Machinery
Foote-Burt Co., Cleveland, O.

Brakes, Hand and Power
Dreis & Krump Mfg. Co., 7440 So. Loomis Blvd., Chicago, Ill.

Buffers, All Types
The Production Equpt. Co., Cleveland, O.

Bushings, Steel
Acme Industrial Co., 419 N. Carpenter St., Chicago, Ill.
Baumbach Mfg. Co., E. A., 1812 So. Kilbourne Ave., Chicago

Bushings, Jig
Acme Industrial Co., 419 N. Carpenter St., Chicago, Ill.

Centering Machines
Sundstrand Machine Tool Co., Rockford, Ill.

Chain Drives
Boston Gear Works, Inc., North Quincy, Mass.
Cullman Wheel Co., 1359 Altgeld St., Chgo.

Chains, Silent and Roller
Cullman Wheel Co., 1359 Altgeld St., Chgo.

Chamfering Machines, Automatic
Grant Mfg. & Mchs. Co., Bridgeport, Conn.

Chucks
Heuser Mfg. Co., 1638 No. Paulina St., Chicago, Ill.

Chucks, Automatic
Procunier Safety Chuck Co., 14 S. Clinton St., Chicago

Chucks, Collet
Procunier Safety Chuck Co., 14 S. Clinton St., Chicago

Chucks, Drill and Tap
Hartford Special Mchy. Co., Hartford, Conn.
Procunier Safety Chuck Co., 14 S. Clinton St., Chicago

Chucks, Quick Change
Procunier Safety Chuck Co., 14 So. Clinton St., Chicago

Chucks, Ring Wheel Grinder
Graham Manufacturing Co., Providence, R. I.

Cold Saws
Burke Machine Tool Co., Conneaut, Ohio

Contract Work Wanted
Burke Machine Tool Co., Conneaut, O.

Controllers, Drum Type
The Cleveland Elect. Motor Co., Cleveland, Ohio

Couplings, Flexible
W. H. Nicholson & Co., Wilkes-Barre, Pa.

Couplings, Shaft
W. H. Nicholson & Co., Wilkes-Barre, Pa.

Demagnetizers
Luma Electric Equipment Co., Toledo, Ohio

Die Making Machines
Harvey Mfg. Corp., 210 Centre Street, New York City

Dies, Blank and Forming
American Tool Works, Inc., Hartford, Conn.

Die Sets
Baumbach Mfg. Co., E. A., 1812 So. Kilbourne Ave., Chicago

Dividing Heads
Wm. Carroll & Son, Cincinnati, Ohio

Dowel Pins, Steel
Acme Industrial Co., 419 N. Carpenter St., Chicago, Ill.
Baumbach Mfg. Co., E. A., 1812 So. Kilbourne Ave., Chicago

Drill Jigs, Special
Heuser Mfg., Co., 1638 No. Paulina St., Chicago, Ill.

Drill Jigs, Universal
Heuser Mfg. Co., 1638 No. Paulina St., Chicago, Ill.

Drilling Attachments, High Speed
Graham Manufacturing Co., Providence, R.I.

Drilling Machines, Multiple Spindle
Foote-Burt Co., Cleveland, O.

Drilling Machines, Portable Electric
Strand Co., N.A., 5001 N. Lincoln St., Chgo

Drilling Machines, Sensitive
Burke Machine Tool Co., Conneaut, Oh
Foote-Burt Co., Cleveland, O.

Drilling Machines, Vertical
Foote-Burt Co., Cleveland, O.

Classified Finding Index

Drives, Lathe
Cullman Wheel Co., 1259 Altgeld St., Chgo.

Electrical Instruments
Illinois Testing Laboratories, Inc., 150 W. Austin Ave., Chicago

Emery Wheel Dressers and Cutters
Western Tool & Mfg. Co., Springfield, O.

End Mills, Shear Cut
Progressive Tool & Cutter Co., Ferndale, Michigan

Etching Machines, Electric
Luma Electric Equipment Co., Toledo, Ohio

Experimental Work
American Tool Works, Inc., Hartford, Conn.

Filing Machines
Harvey Mfg. Corp., 210 Centre Street, New York City

Furniture, Machine Shop
Western Tool & Mfg. Co., Springfield, O.

Gages, Pin, Plug, Ring and Snap
American Tool Works, Inc., Hartford, Conn.

Gages, Taper
Hartford Special Mchy. Co., Hartford, Conn.

Gears
Abart Gear & Machine Co., Cicero, Ill.
Boston Gear Works Inc., North Quincy, Mass.

Grinder, Electric
Chicago Wheel & Mfg. Co., M. C. Tool Div., 116 So. Aberdeen St., Chicago, Ill.

Grinder, High Speed
Chicago Wheel & Mfg. Co., M.C. Tool Div., 116 S. Aberdeen St., Chicago, Ill.

Grinder, Hand
Chicago Wheel & Mfg. Co., M.C. Tool Div., 116 S. Aberdeen St., Chicago, Ill.

Grinders, All Types
The Production Equpt. Co., Cleveland, O.

Grinding Machines, Belt
Walls Sales Corp., 96 Warren St., New York

Grinding Machines, Bench
Hammond Mchy. Builders, Inc., Kalamazoo, Michigan

Grinding Machines, Cutter, Reamer and Tool
National Machine Tool Co., Racine, Wis.
Thompson Grinder Co., Springfield, Ohio

Grinding Machines, Cylindrical
Thompson Grinder Co., Springfield, Ohio

Grinding Machines, Die
Thompson Grinder Co., Springfield, Ohio

Grinding Machines, Internal
National Machine Tool Co., Racine, Wis.
Thompson Grinder Co., Springfield, Ohio

Grinding Machines, Portable Electric
Chicago Wheel & Mfg. Co., M.C. Tool Div., 116 S. Aberdeen St., Chicago, Ill.
National Machine Tool Co., Racine, Wis.
Strand Co., N. A., 5001 N. Lincoln St., Chgo

Grinding Machines, Pulley Finishing
Graham Manufacturing Co., Providence, R. I.

Grinding Machines, Ring Wheel
Graham Manufacturing Co., Providence, R. I.

Grinding Machines, Surface
Thompson Grinder Co., Springfield, Ohio

Grinding Machines, Tool
Hammond Mchy. Builders, Inc., Kalamazoo, Michigan

Grinding Machines, Universal
Thompson Grinder Co., Springfield, Ohio

Grinding Wheels
Chicago Wheel & Mfg. Co., M.C. Tool Div., 116 S. Aberdeen St., Chicago, Ill.

Grinding Wheels, Mounted
Chicago Wheel & Mfg. Co., M.C. Tool Div., 116 S. Aberdeen St., Chicago, Ill.

Grinding Wheels On Shanks
Chicago Wheel & Mfg. Co., M.C. Tool Div., 116 S. Aberdeen St., Chicago, Ill.

Hack Saw Blades
Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago

Hack Saw Machines
Armstrong-Blum Mfg. Co., 341 N. Francisco Av., Chicago

Jigs and Fixtures
American Tool Works, Inc., Hartford, Conn.
Hartford Special Mchy Co., Hartford, Conn.

Knurls and Holders, for Turrets
Graham Manufactoring Co., Providence, R.I.

Lathe Drives
Cullman Wheel Co., 1259 Altgeld St., Chgo.

Lathes, Bench
Atlas Press Co., Kalamazoo, Mich.

Lathes, Engine
Wm. Carroll & Son, Cincinnati, Ohio

Lathes, Manufacturing
Sundstrand Machine Tool Co., Rockford, Ill.

Lathes, Polishing
Hammond Mchy. Builders, Inc., Kalamazoo, Michigan

Classified Finding Index

Leader Pins, Steel
Acme Industrial Co., 419 N. Carpenter St., Chicago, Ill.

Machine Tool Motorization
The Production Equipt. Co., Cleveland, O.

Mandrels, Expanding
W. H. Nicholson & Co., Wilkes-Barre, Pa.
Western Tool & Mfg. Co., Springfield, O.

Mandrels, Solid
W. H. Nicholson & Co., Wilkes-Barre, Pa.

Micrometers
Bradley Machinery Co., Detroit, Mich.

Milling Attachments
Burke Machine Tool Co., Conneaut, Ohio

Milling Machines, Bench
Burke Machine Tool Co., Conneaut, Ohio
Sundstrand Machine Tool Co., Rockford, Ill.

Milling Machines, Hand
Burke Machine Tool Co., Conneaut, Ohio
Sundstrand Machine Tool Co., Rockford, Ill.

Milling Machines, Plain
Burke Machine Tool Co., Conneaut, Ohio
Sundstrand Machine Tool Co., Rockford, Ill.

Motors, Polyphase
The Cleveland Elect. Motor Co., Cleveland, Ohio

Pins, Leader And Dowel
Acme Industrial Co., 419 N. Carpenter St., Chicago, Ill.
Baumbach Mfg. Co., E. A., 1812 So. Kilbourne Ave., Chicago

Pipe Cutters
Ridge Tool Co., Elyria, Ohio

Pipe Vises
Ridge Tool Co., Elyria, Ohio

Pipe Wrenches
Ridge Tool Co., Elyria, Ohio

Press Brakes
Dreis & Krump Mfg. Co., 7440 Loomis Blvd., Chicago, Ill.

Presses, Arbor
Atlas Press Co., Kalamazoo, Mich.
W. H. Nicholson & Co., Wilkes-Barre, Pa.
Wilson, R. K., Buffalo, N. Y.

Presses, Power
Dreis & Krump Mfg. Co., 7440 Loomis Blvd., Chicago, Ill.

Presses, Punch
Lowthwaite Mchs. Co., T. H., 311 E. 47th., N. Y.
Dreis & Krump Mfg. Co., 7440 Loomis Blvd., Chicago, Ill.

Punch Press Feeds
Wittek Mfg. Co., 4309 W. 24th Place, Chgo.

Punch, Shear and Bender, Hand
Armstrong-Blum Mfg. Co., 841 N. Francisco Ave., Chicago

Punches, Hand
Armstrong-Blum Mfg. Co., 841 N. Francisco Ave., Chicago
Lowthwaite Mchs. Co., T. H., 311 E. 47th, New York
Whitney Metal Tool Co., Rockford, Ill.

Punches and Dies
Lowthwaite Mchs. Co., T. H., 311 E. 47th., N. Y.

Pyrometers
Illinois Testing Laboratories, Inc., 150 W. Austin Ave., Chicago

Pyrometers, Portable & Stationary
Illinois Testing Laboratories, Inc., 150 W. Austin Ave., Chicago, Ill.

Reamer Holders
W. H. Nicholson & Co., Wilkes-Barre, Pa.

Rivet Spinners
Linley Brothers Co., Bridgeport, Conn.

Riveters, Multiple Spindle
Grant Mfg. & Mchs. Co., Bridgeport, Conn.

Riveters, Pneumatic
Grant Mfg. & Mchs. Co., Bridgeport, Conn.

Riveting Machine Equipment
Linley Brothers Co., Bridgeport, Conn.

Riveting Machines
Grant Mfg. & Mchs. Co., Bridgeport, Conn.
Linley Brothers Co., Bridgeport, Conn.

Rod Cutters
Armstrong-Blum Mfg. Co., 841 N. Francisco Av., Chicago
Lowthwaite Mchs. Co., T. H., 311 E. 47th, N. Y.

Safety Stops
The Atlantic Co., Chappaqua, N. Y.

Scraping Machines
Anderson Bros. Mfg. Co., Rockford, Ill.

Shafts, Flexible
Strand Co., N. A., 5001 N. Lincoln St., Chgo.

Shaping Machines
Osborne & Sexton Machy. Co., Columbus, O.

Shears, Hand
Armstrong-Blum Mfg. Co. 841 N. Francisco Av., Chicago
Lowthwaite Machine Co., T. H., 311 E. 47th St., New York
Whitney Metal Tool Co., Rockford, Ill.

Shear, Power
Dreis & Krump Mfg. Co., 7440 Loomis Blvd., Chicago, Ill.

Shears, Slitting
National Machine Tool Co., Racine, Wis.
Dreis & Krump Mfg. Co., 7440 Loomis Blvd., Chicago, Ill.

Special Tools and Machinery
American Tool Works, Inc., Hartford, Conn.

Speed Reducers
Abart Gear & Machine Co., Cicero, Ill.
Boston Gear Works, Inc., North Quincy, Mass.
Cullman Wheel Co., 1359 Altgeld St., Chgo.

Speed Reducers, Motorized
The Production Equipt. Co., Cleveland, O.

Spot Welding Machines, Speed.
Eisler Engineering Co., Inc., Newark, N. J.

Sprockets
Boston Gear Wks. Inc., North Quincy, Mass.
Cullman Wheel Co., 1359 Altgeld St., Chgo.

Stop Motions
The Atlantic Co., Chappaqua, N. Y.

Straightening Machines
Whitney Metal Tool Co., Rockford, Ill.

Stud Setters
Frecuzler Safety Chuck Co., 14 S. Clinton St., Chicago

Classified Finding Index

Tap Extractors
Walton Co., Hartford, Conn.

Tap Holders
Procunier Safety Chuck Co., 14 S. Clinton St., Chicago

Tapping Attachments
Procunier Safety Chuck Co., 14 S. Clinton St., Chicago, Ill.

Tapping Jigs, Universal
Heuser Mfg. Co., 1638 No. Paulina St., Chicago, Ill.

Tapping Machines and Attachments
Burke Machine Tool Co., Conneaut, Ohio
Procunier Safety Chuck Co., 14 So. Clinton St., Chicago, Ill.
Whitney Metal Tool Co., Rockford, Ill.

Thermometers, Resistance Type
Illinois Testing Laboratories, Inc., 150 West Austin Ave., Chicago, Ill.

Threading Machines, Automatic, Stud
Grant Mfg. & Mchs. Co., Bridgeport, Conn.

Threading Tools
Armstrong Bros. Tool Co., 308 N. Francisco Av., Chicago
Ridge Tool Co., Elyria, Ohio.

Tool Holders
Armstrong Bros. Tool Co., 308 N. Francisco Av., Chicago
Western Tool & Mfg. Co., Springfield, O.

Tools, Boring
Armstrong Bros. Tool Co., 308 N. Francisco Av., Chicago

Tools, Lathe and Planer
Armstrong Bros. Tool Co., 308 N. Francisco Av., Chicago

Tools, Machinists'
Armstrong Bros. Tool Co., 308 N. Francisco Av., Chicago

Tube Flanging Machines
Grant Mfg. & Mchs. Co., Bridgeport, Conn.

Universal Drill Jigs
Heuser Mfg. Co., 1638 No. Paulina St., Chicago, Ill.

Universal Joints
American Tool Works, Inc., Hartford, Conn.
Boston Gear Works Inc., Norfolk Downs, Mass.

Used and Rebuilt Machinery
American Machinery Co., Cleveland, Ohio
Bernstein, Geo. M., 221 N. Elizabeth St., Chicago, Ill.
Bieser Mfg. & Mchy. Co., Springfield Ill.
Bradly Mchy. Co., Detroit, Mich.
Brotherhood, Percy M. & Son, 114-118 Liberty St., New York City
Brown Machinery Co., St. Louis, Mo.
Brownell Machinery Co., Providence, R. I.
Cincinnati Mchy. & Supply Co., Cincinnati, O.
Davis Machinery Co., Toledo, Ohio.
Eastern Machinery Co., Cincinnati, O.
Elyria Belting & Mchy. Co., Elyria, Ohio.
Easley Machinery Co., E. L., 825 Rees St., Chicago, Ill.
Hackett, J. Lee, Detroit, Mich.
Hill, Clarke & Co., 645 W. Washington Blvd., Chicago, Ill.

Used and Rebuilt Machinery—Cont.
Indianapolis Machinery & Supply Company, Indianapolis, Ind.
Ingersoll Milling Machine Co., Rockford, Ill.
Interstate Mchy. Co., 130 S. Clinton, Chgo.
Iroquois Machinery Co., Buffalo, N. Y.
Johnson & Sons Machinery Co., Wm. C., St. Louis, Mo.
Jones Machine Tool Co., Cincinnati, Ohio
Kennard-Rafkin Mchy. Corp., Jersey City, N. J.
Klauber Mchy. Co., E. L., St. Louis, Mo.
Lucas & Son, J. L., Bridgeport, Conn.
McDonald Machinery Co., St. Louis
Marr-Galbreath Mchy. Co., Pittsburgh, Pa.
Midwest Equipment Co., 625 W. Lake St., Chicago, Ill.
Mid-West Machine Tool & Supply Company, Davenport, Iowa
Miles Machinery Co., Saginaw, W. S., Mich.
Molitor Mchy. Co., Chas., 117 S. Clinton St., Chicago, Ill.
Morey & Co., 45 Mill St., Astoria, Long Island, N. Y.
Norton-Broadway Machinery Co., Cincinnati, Ohio
O'Brien Machinery Co., Philadelphia
Ovlatt & Co., D. C. Cleveland, Ohio
Osborne & Sexton Machy. Co., Columbus, O.
Reliance Machinery Sales Co., Pittsburgh, Pa.
Rentschler & Co., J. P., 6722 N. Maplewood Ave., Chicago, Ill.
Russell Machine Co., Pittsburgh, Pa.
Scott-Bunsbach Mchy. Co., 4657 W. 20th St., Chicago
Segal Machinery Co., 809 W. Lake St., Chicago, Ill.
Simmons Machine Tool Corp., Albany, N. Y.
Steege Electric & Machinery Co., 12 18 So. Clinton St., Chicago
Stegeman Machinery Co., Milwaukee, Wis.
Strong, Carlisle & Hammond Co., Cleveland, Ohio
Sun Machinery Co., 28 Van Buren Street, Newark, N. J.
Victor Machinery Co., 128 S. Clinton Street, Chicago, Ill.
Victor Machinery Exchange, 251 Center St., New York City
Waters, C. H., Elkhart, Ind.
West Penn Machinery Co., Pittsburgh, Pa.
White Machy. Co., A. D., 108 N. Jefferson St., Chicago
Wigglesworth Mchy. Co., Cambridge, Mass.
Winterhoff Tool & Mchs. Co., Elkhart, Ind.
Woinick Machinery Sales, H. F., 21st and Marshall Blvd., Chicago

Vises, Drilling Machine
Armstrong-Blum Mfg. Co., 341 N. Francisco Av., Chicago
Armstrong Bros. Tool Co., 308 N. Francisco Av., Chicago
Graham Manufacturing Co., Providence, R. I.
Heuser Mfg. Co., 1638 No. Paulina St., Chicago, Ill.
Martin Tool & Die Works, J. E., Springfield, O.

Vises, Machinists'
Western Tool & Mfg. Co., Springfield, O.

Vises, Milling Machine
Graham Manufacturing Co., Providence, R. I.
Hartford Special Mchy. Co. Hartford, Conn.

Vises, Shaper
Graham Manufacturing Co., Providence, R.I.

Welding Machines, Electric Spot
Eisler Engineering Co., Inc., Newark, N. J.

Welding Machines, Resistance
Eisler Engineering Co., Inc., Newark, N. J.

Wheels, Grinding
Chicago Wheel & Mfg. Co., M. C. Tool Div., 116 S. Aberdeen St., Chicago, Ill.

Used and Rebuilt Machinery Section

Lists of Used and Rebuilt Machinery, either For Sale, Wanted, or For Exchange, set in uniform style, will be published in the Classified Section at the rate of 60 cents a line across the page, each issue, plus $3.00 for name and address. Minimum charge, $6.00. No display permitted.

Write directly to those offering the machines for sale, for prices and full descriptions. If what you seek is not advertised, use the blank enclosed to make known your wants in either new or used machinery and the publisher will pass them along to the advertisers.

FOR SALE BY

Geo. M. Bernstein & Co.,
Telephone State 4076 - - 12 S. Clinton St., Chicago, Ill.

APRON BRAKE.

6'x¼" Dreis & Krump power apron brake geared punch, like new.

FOR SALE BY

C. H. Waters Machinery Co , - 221 Harrison St., Elkhart, Ind.

Dividing head, 14" Cinc. Universal
Lathe, 32"x12' Schumacher & B.q.c.g.
Miller & driller, No 1½ Knight, vert.
Millers, Becker vertical, several.
Miller, No 3 Cincinnati, plain.
Slotter, 18" Newton.
Shapers, 20 & 24" Gould & Eberhardt cone drive, back geared.
Die filers, drill presses, planers, presses, electric motors, and many others.
Send us your inquiries.

FOR SALE BY

E. L. Klauber Machinery Co., 320-22 S. Third St., St. Louis, Mo.

Gear cutter, 34" Whiton automatic, for spur, bevel and worm gears.
Lathes, 14x6, 14x8, 16x6, 16x8, 18x8, 20x8, 22x12, 24x12 and 30x14.
Milling machines, No. 2 Cincinnati plain, dividing heads, vise, arbors.
Presses, No. 18 Bliss o. b. i.; No 4½ Niagara o. b. i.; No. 20 Bliss.
Screw machines, No. 0 Brown & Sharpe automatic; No. 3 Wood tilted turret.
Surface grinder, No. 2 LaSalle automatic, with magnetic chuck.

FOR SALE BY

Percy M. Brotherhood & Son 114-118 Liberty Str , N. Y. City

Boring mills, 10' Niles; 72" Sellers; 44"-54"-61" Bullard Maxi-Mills.
Lathes, 72"x40' Putnam; 72"x50' Pond.
Rolls, Hilles & Jones No. 5, 16"x8'.
Forging Machines, Press Brakes, Shears, Bending Rolls, Planers, Shapers, Grinders, Milling Machines all sizes.
All Selected Tools.

FOR SALE BY

H. F. Wolnick Machinery Sales

Phone Lawndale 1777 - - 21st & Marshall Blvd., Chicago

Exclusive plant liquidation and appraisals.

Drill, 2 spindle.
Lathe, 14"x6'.
Presses, No 18, No. 19 Bliss.
Press, No. 78 Toledo, geared, m. d.

We have a lot of metalworking machinery for disposal
Write us your requirements.

FOR SALE BY

West Penn Machinery Company

1208 House Building, • • • Pittsburgh, Pa.

Air compressors, 30 to 2500 cu. ft.
Baler, Logemann, hop'r, 30"x21"x28".
Bolt cutter, 2" Acme, sgl. hd., b. d.
Boring mill, 24" Bullard, New Era.
Boring mill, 44" Gisholt, 2 hds. s.p.d.
Bor. mills, 42" & 62" Bullard, 2 heads.
Boring mill, 72" Niles, 2 heads, m.d.
Boring mill, 10-16, Niles, b. d.
Bor. mill Niles floor type, 4 & 6½" bar.
Boring mill, hor., 4" bar Bement, m. d.
Brakes, hand, 8'x16 ga. Chicago.
Brake, box & pan, 60"x10 ga. D. & K.
Brake, leaf, 10 Dreis & K. 10 ga. m. d.
Brake, 8'x¼" Chicago m. d. & b. d.
Brake, 10' Dreis & K. ⅜", m. d.
Bulldozers, Nos. 2, 4, 6, 9, 28, & 30.
Cranes, Electric Traveling.
Draw bench, 150,000 lb. Stand. m. d.
Drill, mult. 4-spdl. Avey, belt drive.
Drill, mult. 4-sp Colburn, No 4 m. t.
Drill, radial, 2½' Fosdick, t. a., b. d.
Drill, radial, 3½' Cin-Bickford, s.p.d.
Drill, radial, 4' Prentice, t. a., b. d.
Drill, radial, 5' Cin-Bick. t. a., s.p.d.
Drill, rad., 6' Cin-Bickford, t. a., m. d.
Drill, radial, 6' Dreses, s. p. d.
Drills, upright 10" to 36".
Engine, gas, horiz., 30 h.p. Bessemer.
Flanger, McCabe, ¼" capacity, dies.
Forge, No. 409 Champion, 40x30.
Forging mch. 1½" Acme, st. fr. b. d.
Gear cutters, 11", 18" & 24" Gleason.
Gear cutter, spur, 36"x10" Newark.
Grinder, elec. 8" B. & D., dbl. end.
Grinder, nail die, No. 101 Bridg., m. b.
Grinder, rad., 14" M. & D., m. d.
Grinder, surf. 42" Spring, tbl. 18x84".
Grinder, surface, No. 16 Blanchard.
Grinder, tool & cut., No. 2 Walker.
Generators, eng., oil, gas, belt & mtr.
Hammer, Blacker, power, 35-lbs.
Hammer, 80-lb. Bradley, cush. belve.
Hammers, Nos. 2-B, 3-B, 4-B, Nazel.
Hammers, steam, 600 lb. to 6000 lbs.
Keyseater, Nos. 3 and 8 Mitts & M.
Keyseater, No. 0 & 2 Baker.
Lathe, 7"x30" Dalton, m. d.
Lathe, 16"x6' Le Blond, q. c. g., d. b. g.
Lathe, 16 & 18"x6' Mon., g. h., qcg., m. d.
Lathe, 14"x12' Lodge & S., g. h., m. d.
Lathe, 18"x8' L. & S., grd. hd., m. d.
Lathe, 18"x10' Sidney, q. c. g. t. a. b. d.
Lathe, 24"x16' Bridgeford, g. hd. m. d.
Lathe, 26"x21' 6" Bridgeford, g. h.
Lathe, gun boring 49"x82' m. d.
Lathe, 48"x28' Bridgeford, g. hd. m. d.
Lathe, 61"x39', H.-S & G. grd. hd. m. d.
Lathe, turret, No. 6 Warner & S.
Lathe, turret, 18" Libby, m. d.
Lathe, turret, 24" Steinle, 6½" hole.
Miller, duplex, 24" Cincinnati, auto.
Miller, pl., Nos. 3 & 5 Cinc., s. p. d.
Miller, pl., No. 34 Ohio, tbl. 13½x60".
Miller, universal, No. 3 Le Blond.
Miller, univ. Cin. tbl. 56"x13½" m. d.
Miller, vert. No. 2 Cin. tbl. 54½x11".
Motors, a. c. & d. c.
Nut tapper, Acme, 10-spdl 1½", s. auto.
Nut mche., Wat-Far. ⅞" cold. b. d.
Pipe machine, 2 Landis, belt drive.
Pipe mches., 4", 6" & 8" Oster.
Planer, 30"x30"x10' Woodward & P.
Planer, 42"x42"x10' N.-B.-P. 3 hds.
Planer, 60"x60"x18' Pond, 4 hds. rev.
Planer, 96"x96"x33' 4 hds. rev. m. d.
Planer, o. s., 36"x36"x16' D. & H.
Planer, o. s., 48"x48"x16' D. & H. m. d.
Press, arbor, No. 17 Green., 18 ton.
Press, auto., McDonald, No. 31-B G.
Presses, o. b. i. Bliss, Nos. 18, 19, 20.
Press, No. 6-A Tol. o. b. i. bed 34x34".
Press, No. 4 Nia. o. b. i., grd. 3" str.
Press, No. 96-A Toledo, d. c. 5" str.
Press, screw, No. 87 Niagara.
Press, wheel, 170-ton Wat. S. 60".
Press, wheel, 200-ton Elmes, 48".
Press, wheel, 300-ton, motor drive.
Punch, hand, Shatz, bar and angle.
Punch, E F Cleveland, 36" thrt., 1½"-1"
Punch, No. 56 H. & W. 1½, 1, 12" thrt.
Punch, mult., No. 5 H. & J. 10' & 8'.
Riveters, air, hammer, spinning.
Rolling mill, cold, 8" x 9" Bliss, new.
Roll, bend 50" Bertsch, 3/16" int. type
Rolls, bending, 12"x¾" H. & J. d. e.
Roller, thread, Nos. 10, 30, 40 W.-F.
Saws, band, 26 and 33" Fay & Egan.
Saw, friction, Nos. 2 & 3 Ryerson.
Saw, hack, 4"x4" Racine Jr., m. d.
Saw, hack, No. 5 Marvel, 6"x6".
Saw, hack, No. 4 Robertson, 8"x8".
Saw, cold, No. 6 Coch.-Bly. s. p. d.
Screw mchs. Nos. 52, 53, 55 Nat. A.
Shapers, 16", 20", 24" & 36" G. & E.
Shaper, 48" Morton draw cut, m. d.
Shear, angle, 6"x6"x1" H. & J.
Shears, alligator, 1½", 2", 3" & 4".
Shear, bevel, Lennox ¼", b. d.
Shear, circle, No. 13A Niagara, b. d.
Shears, foot, 30" and 36" Pexto.
Shear, guil. No 5 H. & J. 4" sq., m. d.
Shear, squar. 48"x¼" 6" thrt. m. d.
Shear, squar Nia., cap. 52"x¼", m. d.
Shear, squaring 8'x14 ga. Ohl, b. d.
Shear, 8' Bertsch, ⅜", 18" thr., m. d.
Shear, 12' x ⅜" Wheeling, 31" gap.
Slotter, 15" B.-M. tbl. 30" dia., m. d.
Slotter, 36" Bement, crank; 15" Dill.
Straightner, 2-A Kane & R. 20-roll.
Straightener, 66"x1" Newbold, m. d.
Straightner, 72" Newbold, 9-roll m. d.
Straightner, 4" round Abramson.
St'r. & sh., No. 1026 B. & J. 9"x3/16"
Testing mche., Brinnell hardness.
Thread rollers, 5/16", 1" & 1½", b. d.
Upsetters, 1" to 6".

USED AND REBUILT MACHINERY

FOR SALE BY

Brownell Machinery Co., - 150 Pine St., Providence, R. I.

Boring mill, 42" New Era, m. d.
Drill, 4-spindle, Henry & Wright.
Gear cutter, No. 13 Brown & Sharpe.
Gear cutters, 60" and 72" B. & S.
Grinder, No. 2 Morse universal.
Hammer, 125 lbs. Beaudry forging.
Hammer, 300 lbs. Stand. auto. drop.
Lathe, 28"x27' Schumacher & Boye.
Screw machines, No. 2 B. & S. auto.
Screw mche., No. 4 B. & S. wire fd.

FOR SALE BY

J. L. Lucas & Son, Inc., - - 3 Fox St., Bridgeport, Conn.

24" Bullard New Era, v. t. l., m. d.
36" Bullard New Era, v. t. l., m. d.
42" Bullard New Era, v. t. l., m. d.
61" Bullard Maxi-mill, m. d.
8" Bullard Multi-matic, m. d.
Grinder, 14" Pratt & Whitney, sur.
Grinder, No. 2 Cincinnati centerless
Grinder, Heim centerless.
No. 16 Blanchard Ser. 825, 30" ck.
No. 3 Cin. Univ. rect., mot-in-leg.
No. 3 Cin. plain rect., mot-in-leg.
No. 4 Cin. plain rect., mot-in-leg.
Millers, 2A, 3A B. & S. Univ.
No. 2B K.&T. Univ., dbl. overarm.
No. 3B K.&T. Univ., dbl. overarm.
Lathe, 16x8 American, mot-in-leg.

FOR SALE BY

Stegeman Machinery Co., 610 W. Michigan St., Milwaukee, Wis.

Baler, No. 6-R Loge, scrap metal md.
Boring mill, 52" King, rapid tr. m. d.
Broach, No 2-S LaPointe hyd. m. d.
Drill, 3' American triple purpose rad., 85% new.
Drill, 20 spindle No. 12 Natco.
Gear generators, 15" Gleason, m. d.
Miller, No. 2 K&T pl. mtr. in base 98%.
Planers, 36x36x12' or 16' Cinc. 2 hd;
36x36x14' & 24' Clev. openside m. d.
Presses, No. 165 Toledo toggle m. d.; 72" Hamilton 225 ton dbl. crk., m. d.; Nos 5½ & 6 Niagara o. b. i. flywheel
Shapers, 20" Hendey gear box, single pul.: new 24" Ohio hvy. duty s. p. d.
Thread miller, 6x60 P. & W.
Turret lathes, Nos. 2-A & 3-A W. & S.
Welders, 10 & 15 kw. A.E.F spot, 98%.
300' ball bearing, steel roller coveyer, and 700' Cleveland Tramrail overhead conveyor system; 3" ctr. 16" wide 90% new.

We specialize in high grade used machinery. Over 400 tools available.

FOR SALE BY

The Elyria Belting & Machinery Co.,
Corner Williams and Buckeye Streets, - Elyria, Ohio

Bolt cutter and threader, Acme 1½".
Burnishing barrel, Globe, 3-compartment, wood lined, floorspace 76x41.
Bulldozers, Nos. 3 & 5 Williams & W., 16 & 20" stroke, driv. by 3 phase mtr.
Compressor, Sullivan Class W J, 20x12½x16, 872 cu. ft., 100 lb. pressure.
Draw bench, 25,000 lbs. Waterbury-Farrel.
Hammer, 75 lb., Beaudry Champion.
Hammer, Blacker, (blacksmith) belt drive, anvil and base.
Miller, No. 3 Kempsmith, univ. horiz. dividing head, d. b. g.
Miller, No. 20 Ohio, universal horizontal, back geared.
Pebble mill or tumbling barrel, Crossly.
Pipe bending & straightening presses, Long & Allst. 4" & 6" cap.
Press, No. 103 Consolidated, double crank, 2" stroke.
Press, special, No. 55 Toledo, s. a., d. b. g., 16" stroke.
Presses, forging, Consolidated, Nos. 56, 56½, 55, geared, side-shear, 7" stroke.
Punch, No. 37 Williams & White multiple, 1½" stroke.
Rolling mills, Blake & Johnson, also McWilliams.
Separators, Dings magnetic, 220 volts.
Shear, 10' Cleveland, ½" cap.

OWNED BY US—AND IN OUR WAREHOUSE.

USED AND REBUILT MACHINERY

FOR SALE BY

Brown Machinery Co., - - 2333 N. 9th St., St. Louis, Mo.

Drills: 24", 26" and 32"; No. 66-D Moline 4-spindle Hole Hog.
Grinders: No. 6 Besly dbl. spindle; No. 220 Badger auto. disc; 12x30" Modern, plain, s. c. c. s.; No. 4 Cincinnati, 14x72 cylindrical; P. & W. 36" vertical surface.
Hammer, 40 lb. Bradley helve; 100 lb. Little Giant.
Lathes, 30" Blaisdell, 26" Harrington gap, ext. bed; 26" Putnam, taper att., 18" & 16" Lodge & Shipley; 16" & 14" Monarch; 7"x6' Lo-swing; 18"x10' South Bend.

Millers: No. 2 Hendey-Norton, univ.; No. 3½ Fox; No. 4 Hendey Lincoln;
Planer, 42x42x10 Pond.
Press, No. 7 Zeh & Hahneman, Nos. 1, 3, 4 Loshbough Jordan.
Punch, Cleveland C ⅝ in ⅞"; Rock River Style L ¾ in ⅞.
Punch & shear, No. 9C Beloit, ⅞ in ⅞".
Punch & shear, L. & A. ¾" cap.
Riveter, No. 5A High Speed, ⅞".
Shaper, 24" Ohio; 20" Queen City.
Threaders: ⅞" Geometric; National 1½" double head and single head.
Welder, 20 k. w. Agnew.

FOR SALE BY

Marr-Galbreath Machinery Co., 58 Water St., Pittsburgh, Pa.

Air compressor, 10x10" Chgo., n.s.b.
Air comp., 15-21 cu ft., 175 lb., m. d.
Angle roll, No. 3 Niagara, 1½x3/16".
Bolt cutter, 1½" Acme, Landis heads.
Boring mill, horiz. 4" bar, Niles.
Boring mill, 30" Colburn.
Brake, 8'x14 ga. D. & K., belt.
Brake, 48"x18 ga., P.S. & W., hand.
Brake 10' Keene toggle, 16 gauge.
Brake, 10'x3/16" Dries & K., power.
Brake or press, 10'x10 ga., Ohl.
Broaching mch. Nos. 1 & 3 LaPointe
Bulldozer, No. 4 W. W., motor dr.
Bulldozer, No. 28-W. W., motor.
Crimping roll, 6½' Robinson, 16 ga.
Drills, 20" b. g., p. f.
Drill, 26" Rockford, g. f. taper att.
Drill, radial, 3' Dreses, 3' Cinn.-B.
Engine, Diesel, 200 h. p. horizontal.
Forging mchs., 1½", 3" & 3½" (steel).
Generators, 50 & 125 k.v.a., Fa-Mo., 3/60/230 v.
Grinder, 12"x96" Landis pl., for m.d.
Grinder, No. 1½ Landis universal.
Grinder, No. 2 B. & S., surface, m. d.
Grinder, bench., ½ h.p., U. S. motor.
Grinder, surface, No. 2 Brown & S.
Grinder, universal t. & c. Nos. 2 & 3.
Hack saw, pwr., 6"x6" Racine, vise.
Hack saw, 6x6" Stering, vise & c. s.
Hack saw, 13"x16" Peerless, b. d.
Hack saw, No. 14 Atkins Power, b.d.
Hammer, No. 2-B Nazel, m. d.
Hammer, 40 lb. Bradley, H. H.
Hammer, 100 lb. Bradley, U. S.
Hammer, 800 lb. Erie stm. forg., s.f.
Hammer, 1000 lb. Chbg., steam drop.
Hoists, chain, 1 to 8-tons capacity.
Jointer, 8" Fay & Egan; 12" Powers.
Keyseater, 24"x2½" Morton.
Lathe, 10"x4' So. Bend, with a.c. mtr.
Lathe, 13"x6' Sebastian g. h., a.c.m.
Lathe, 18"x6' National, q. c. g.
Lathe, 18"x8' Superior q.c.g., ck & cs.
Lathe, 20"x8' Hendey, tie-bar, t. a.

Lathe, 20"x10' Hendey tie-bar, t. a.
Lathe, 18"x12' Hendey, t. b., t. a.
Lathe, 19"x10' LeBlond, q. c. g., t.a.
Lathe, 24"x12' F'gh., q. c. g., chuck.
Lathe, 48"x26' geared head, m. d.
Millers, plain, No. 3 LeBlond.
Milling mch., No. 2 Cincinnati.
Miller, No. 28 Ohio; No. 3 Cin'ti.
Miller, 2-GS. Hendey, g. b., s. p. d.
Millers, horiz. No. 4 Ohio, 72x30x20"
Millers, vert., Becker, 3, 4B, 5B.
Miller, universal No. 4 B. & S.
Motors, 1, 2 & 3 ph., also d. c.
Pipe machine, Williams, 3", s. p. d.
Pipe machine, 8" Jarecki.
Planer, 24"x24"x4' Pond, 1 head.
Planer, 30"x10' W. & P., 2-heads.
Press, 42-h.p. Toledo, horn, plain.
Press, No. 6 Toledo, o. b. i., pl. m. d.
Presses, o. b. i., 18, 20 Bliss, m. d.
Press, 74½ S. Bliss b. g., 10" str.
Press, 75½ Bliss, b. g., t. r., 5" str.
Press, 78½ Bliss, d.g., t.r., 10" str. (2).
Press, No. 80½ Bliss, tie-rod, 32" str.
Presses, 250-ton B. & B. tire, vert.
Punch, s. c., Badger, 7" thrt., ⅞"x⅞".
Punch, s.c., No. 1 L & A 1½"x1", 30" t.
Punch & shear, d. c. 16" thts; 1½"x1" with angle & bar shear blades, m.d.
Riveters, 2-A, 5½ B, high speed.
Shaper, 20" Cin. G. B., a.c. motor.
Shapers, 16" and 24" G. & E., m. d.
Shaper, 24" P. & J. down feed & m.d.
Shaper, 24" Gould & E., vise & cs.
Shaper, 28" S & M., b.g., crk., b. d.
Shear, 36"x16 ga. Niagara, foot.
Shear, foot, 36" Niagara, 18" gap.
Shear, plate, 97"x½" Toledo, m. d.
Shear, thtless Lennox ⅜", ⅞".
Shear, rotary, 16 ga., Yoder, 24" thr.
Shear, 10'x16 ga. Ohl power.
Slotter, die, Garvin, cone drive.
Welder, butt, 200 & 300 k. w.
Wheel press, 60-ton W. S., 34"x8½".

FOR SALE BY

Segal Machinery Co., - - 810 W. Lake St., Chicago, Ill.

Drill, 5' Dreses, s. p. d., gr. box.
Miller, No. 3-B Brown & S., s. p. d.
Press, No. 164 Cousol.d.cr.24x60 bed
Compressor, Ingersoll-Rand 2-stage, 9x12 and 14x12 cylinders.
Converter, 220 k. w. West'hse. v. d. c., 800 amp, a. c., 3 ph., 60 cy., 1200 rpm.
Screw mach., No. 4 W. & S. g. f. h.
Shaper, 16" Milwaukee, vise & c/s.
Shear, 62" Niagara, ft. pwr., 18 ga.

FOR SALE BY

Reliance Machinery Sales Company

1405 Brighton Road, N. S. - - - - Pittsburgh, Pa.

Air compressor, 170 cu. ft. Worth'n.
Automatic, 1½" Cleve. 4-spdl., m d.
Buildozer, No. 9 Williams & White.
Drill, 4 spindle No. 4 Colburn Mfg.
Drill, 4 spindle No. 2 Colburn, Mfg.
Drill, 4' Western radial, motor dr.
Drill, 6' Cincinnati-Bickford, radial.
Hammer, 300 lb. Bradley up. helve.
Hammer, 100 lb. Beaudry upright.
Lathe, 48"x20' Betts-Bridge., m. d.
Miller, No. 2½ Rockord, plain.
Press, 64" Bliss double crk., No. 5½.
Press, No. 14 Bliss Toggle 80 000 lb.
Press, No. 59½ Toledo, 145 000 lb.
Shaper, 16" Whipp, b. g., vee ram.
Shapers 24" & 32" G. & E. 230 v. d. c.
Shear, squar. 60"x18 ga. Streine.
Screw mach., No. 4 W. & S., univ.
Tapper, ½" Acme, 6-spdl. nut.
Shear, alligator, hi.knife, 1½" sq.

FOR SALE BY

The O'Brien Machinery Co., 113 N. Third St., Philadelphia, Pa.

Bending rolls, 10' Bertsch, ½" cap.
Boring mill, 34" King, 1 head.
Boring mill, 72" Gisholt vert., 2 hds.
Column facer, 14" Espen-Lucas.
Crane, electric travel, 15 ton a.c. mtrs.
Drills, all sizes upr., sensi. & radial.
Flanging machine, ½" McCabe.
Grinder, 10"x52" Landis, self contained, plain.
Hammer, 800 lb. Erie, steam forging.
Lathe, 18"x6' Monarch, taper.
Lathe, 42"x38' Bridgeford 2 car. m.d.
Miller, No. 3 B. & S., pl., s. p. dr.
Miller, Univ. No. 2A Brown & S., range 25"x8"x18".
Pipe machines, 2, 4, 6, 8 and 12" belt and motor drive.
Press, 36" Z. & H. double crank, cap. 80 tons.
Punch, No. 3 Southwark 1½", mtr.
Punch, Thomas angle duplikator.
Shear, Niagara 8', cap. 3/16", 1" gap.

FOR SALE BY

The Jones Machine Tool Co., Front & Pike Sts., Cincinnati, Ohio

Air compressor, 10x10 Bury.
Bolt cutter, 2" Landis (long bed).
Bolt cutter, 1½" Landis, single spdl.
Bolt cutter, 1½" Landis, dbl. spdl.
Boring mill, No 32 G. & L., s. p. dr.
Brake drum truing lathe, m. d.
Drill, No. 14 Colburn heavy duty.
Gear cutter, No. 13 B. & S., bevel & sp.
Gear hobber, No. 12 Barber-Colman.
Grinder, No. 1 Diamond surf. 12x24"
Grinders, disc, various sizes.
Hack saw, 8x8 Racine, m. d.
Hammer, 1000 lb. steam, s. frame.
Keyseater, No. 1 Baker.
Lathes, shapers & planers, all sizes.
Milling machines, all sizes.
Nibbler, No. 1 Gray 3/16" capacity.
Radial drills, various types.
Rail drill, 10' Andrews 16-sp., ½" cap.
Shaper, 7" Rhodes, vertical.
Shear, 10' Poorman 14 gauge.
Shear, 60" Yoder, rotary, 16 ga.
Shear, 18" Southwark rotary, 10 ga.
Shear, 37" Toledo 16 ga, 15" gap.
Welder, 35 k. w. Federal spot.
Upsetters, 2" Ajax, belt drive.

PRESSES

No. 1, Bliss, toggle.
No. 92 B Toledo 38" dbl. crank, grd.
No. 91C Toledo 36" dbl. crank, plain.
No. 43 Robinson 46" dbl. crank, grd.
Open back inclinables. Various sizes.

PRESS-BRAKES

120" Obl. 10 ga. belt drive.
120" Bertsch, 3/16", motor drive.

We have a large stock—Send for new list

USED AND REBUILT MACHINERY

FOR SALE BY

Wigglesworth Machinery Company

199 Bent Street, - - - - Cambridge, Mass.

Borer, No. 35 Landis floor.
Boring mill, No 0 G. & L.
Engraver, E 5 Keller.
Grinder, 20"x168" Landis plain.
Lathe, 25"-28"x24' Le Blond, gd.hd.
Miller, 6"x18" P. & W. thread.
Miller, 6"x80" P. & W. thread.
Miller, 48"x24"x10' Ingersoll.
Nibbler, No 1, 6" Campbell.
Seamer, No. 3 B Bliss, double.
Shear, No. 1120 Niagara power, 18 ga.
Spline miller, 6" Taylor & Fenn.
Jones & Lamson, 2 spdl., like new.

FOR SALE BY

McDonald Machinery Co., 1535 N. Broadway, St. Louis, Mo.

Bolt mchs., Landis & Acme 1½".
Boring mill, Lucas & Bul.hor.& vert.
Brake, D. & K. 6' 16 gauge, power'
Drills, Cin-Bickford 3' & 3½' radials.
Drill, Moline 32-spindle hole hog.
Gear hobber, G. & E. 24" & 60".
Grinders, B. & S. No. 2 surf. & univ
Grinder, Cincinnati 14"x72" plain.
Keyseaters, M. & M. No. 2.
Lathes, Hendey 20"x10', 13"x6' & 20"x12' grd hd.; 50 others in stock.
Milling machines, B.& S. No 5, vert.
Milling machines, Van Norman No. 2 duplex; B. & S. No. 1½ Cinc. No. 1½, Hendey No. 1-B, Kemp. No. 3; Ohio No. 29 B. & S. No. 2-A single pulley drive, all universal; Kemp. No. 1, LeBlond No. 3-H.; B. & S. No. 3-B, s. p. d., Cleveland No. 2, s. p. d., all plain, Cincinnati 12" Mfg.
Pipe mches., Curtis, B.& K. 12" m. d.
Punch press, d. c. grd., 79" between uprights. 5" stroke, wt. 38,000 lbs.
Screw machines, Foster No. 5, gr.hd.
Shapers, G.& E., S. & M., Cin., Ohio, American, Steptoe, Queen City, 12", 16", 18", 20", 24" and 26".
Square shears, Hertsch 10' 16 ga.
Turret lathes, W. & S. No. 2A univ.

FOR SALE BY

Scott-Bansbach Machinery Co., 4607 West 20th St., Chicago, Ill.

Miller, No. 2H B. & S. plain, cone type, with vise, c/s and arbors	$ 400.
Miller, No. 2 Van Norman with sub head only, belt drive	300.
Miller, No. 2 MU. Garvin universal, fully equipped	350.
Miller, 12" Cincinnati, mfg. type, s. p. d., vise and pump	150.
Miller, Briggs, G. & E. manufacturing, 16"	75.
Miller, No. 5 Becker vertical, no rotary	300.
Miller, No. 7 Becker, Lincoln type	75.
Miller, Ingersoll slab, 42"x36"x9'	400.
Planer, 24x24x8 Fitchburg, 1 head	100.
Planer, 36"x36"x12' Cincinnati with 2 heads	800.
Press, No 0 Consolidated bench o. b i. with mtr., 1½" str. 350 lbs. 7½ ton	100.
Press, No. 1½ Consolidated, o. b. i. 3" str. 900 lbs., 10½ ton with belted mtr.	150.
Press, No. 1½ Consolidated o. b. i. 2¾" stroke, 900 lbs., 10½ ton, with geared friction motor	175.
Punch, 10" throat, single end, Kneeland or Spaulding, each	100.
Riveter, No. 82 Grant bench type, belt drive, ½" capacity	100.
Riveter, No. 3A, high speed hammer, capacity ½", with motor	200.
Saw, No. 5 Marvel high speed 6"x6"	75.
Scleroscope, Shore complete	125.
Screw machine, No 2 Foster, friction back geared, 1" capacity	175.
Shear, 30" Bertsch, 16 gauge, 12" gap, foot power	75.
Separator, Curtis oil, 1 bushel	200.
Separator, oil, American 1½ bushel	200.
Separator, McKinzie for separating chips, belt drive	150.
Shaper, 16" Smith & Mills hvy. duty, back geared crank, vise and c/s	200.
Shaper, 20" Cincinnati, crank, back geared, vise and c/s	350.
Turret lathe, 2½x10" Milholland, for chuck and bar work	400.
Turret lathe, 24" Steinle, 4" hole, side carriage	200.

FOR SALE BY

J. P. Rentschler & Co., - 6722 N. Maplewood Ave., Chicago

Apr. brake, No. 206 D. & K. 10'x¼".
Apr. brake, No. 227 D. & K. 12'x⅜".
Grinder, disc, No. 17 Besly.
Hack saws, power, Racine 6x6, 8x8.
Mill'g mch. No. 3A B.&S. univ. m.d.
Presses, various sizes and types.
Press, No. 2-W Bliss wiring.
Press, embossing, 500 ton cap.
Rolls, bending, 4'x16 ga. Niagara.
Welder, spot, Taylor 10 k. w.

FOR SALE BY

J. Bleser Mfg. & Machy. Co., 16th & Madison St., Springfield, Ill.

Band saws, wood and metal.
Boring mill, No. 31 Lucas horiz.
Electric motors, all sizes.
Lathes, all sizes $75. up.
Lathe, Lodge & S., 36"x18' q.c., m.d.
Lathe, 14x6 Hendey, q.c., coll. taper.
Lathe, turret, W. & S. 1" cap. & #4.
Millers, univ., #3 Cin.; #2 Garvin.
Punch presses, No. 4 arch. & o. b. i.
Shaper, G. & E. 16".

FOR SALE BY

Winterhoff Tool & Machine Co , 112 S. Elkhart Ave., Elkhart, Ind.

Drills, 16" to 3', plain, back gear and radial.
Grinder, Brown & Sharpe Universal tool and cutter No. 12.
Lathe, South Bend 13"x5', q. c. g., taper attachment, collets, c/s.
Planer, Gray 24"x24"x5', c/s.
Saw, Peerless 4"x4", motor drive.
Shaper, G. & E. 24", b. g., high duty, cone drive.

FOR SALE BY

The E. L. Easley Machinery Co.

Telephone Lincoln 6320 - - - 831 Rees St., Chicago

Drill, radial, 2½' Mueller.
Drill, radial, 5' Prentice.
Drill, radial, 5' Pond.
Drill, radial, 6' American.
Press brake, D. & K. 86", 12 ga. cap.
Press, No. 21½ Bliss, o. b. i.
Shear, 6' Niagara, 14 ga., m. d.
Shears, 42" Stoll, 16 ga. cap.
Shears, 4' Niagara, 3/16" cap., m. d.
Shears, 10' 3/16" cap. L. & A., m. d.

FOR SALE BY

Wm. C. Johnson & Sons Machinery Co.,

1211-1223 Hadley Street, St. Louis, Mo.

Air compressors, all sizes.
Bar shear, 5'x¼".
Bolt header, 2" Ajax.
Boring mill, 36" Gisholt.
Bulldozer, No. 3 Williams-White.
Bulldozer, No. 4 Ajax.
Drills, 1-spindle Avey.
Grinder, Wells Bros. universal.
Grinder, 12"x60" Landis universal.
Grinder, 12"x36" Thompson univ.
Grinder, No. 60 Heald cylinder.
Hammer, No. 3B Nazel.
Hammer, 60 lb. Bradley helve.
Lathe, 16"x8' Lehman.
Lathes, 16"x6' tool room, (2).
Lathe, 24"x12' Schumacher & Boye.
Lathe, 24"-48"x18' McCabe, 2-spdl.
Lathe, 36"x15' American, q. c. g.
Lathe, 30"x16' Prentice, geared hd.
Millers, Nos. 3 & 4 Brown & S., pl.
Miller, No. 2 Cincinnati, plain.
Miller, No. 3 Kempsmith, plain.
Miller, Ingersoll slab, 27"x23"x14' bed, 4 heads, motor drive.
Pipe machines, 4" and 8".
Planer, 60"x48"x10' Gray.
Press, No. 1½ Bliss toggle.
Press, No. 24 Toledo cam drawing.
Press, No. 723 Toledo cam drawing.
Punch, No. 14 W. W., 12" throat.
Punch, two 20" throats, cap. 1" in 1"
Sand slinger, Beardsley & Piper.
Shaper, 16" Smith & Mills.
Shaper, 24" American, motor drive.

FOR SALE BY

Mid-West Machine Tool & Supply Co., Davenport, Iowa

Automatics, No. 00 B. & S.
Drill, Allen 6 spindle, h. s.
Drill, ISS Garvin duplex, 2½" cap.
Grinder, 10"x36" Norton.
Grinder, No. 10 B. & S. ext.
Hobbers, Nos. 3, 12-B & C.
Lathe, No. 9 LeBlond multi-cut.
Millers, Nos. 1 & 2 Brown & Sharpe.
Radials, 3' Cincinnati Bickford.
Turret lathe, Nos. 2 & 6 Warner & S.

FOR SALE BY

Davis Machinery Co., St. Clair & Washington Sts., Toledo, Ohio

Boring mill, 24" Bullard, side head.
Drill, 4-spindle Henry & W. h. s.
Drill, 3-spindle Leland-Gifford h. s.
Grinder, No. 11 Brown & S., plain.
Lathe, 20"x10' American q.c.g., d.b.g.
Millers, Model C Becker, vert., (2).
Press, 19 Toledo deep throat, b. g.
Press, 18-C Bliss o. b. i.
Press, No. 3 Niagara o. b. i.
Shaper, 20" Ohio back geared.
Slotter, 6" Newton.
Tappers, No. 2 & 2X Garvin, (4)

FOR SALE BY

Midwest Equipment Co., 628-30 W. Lake St., Chicago, Ill.

Air compressors, 8x8, I. R. compl.
Gear hob., No. 12, 3 B.-C., arbor, grs.
Grinder, No. 2 B. & S. with mag. ck.
Lathe, 17x8 Sidney, l.c.g., complete.
Lathe, 16x8 Hendy, q. c. g., tap. att.
Lathe, 14x6 Sidney, quick ch. gear.
Lathe, 34x10 Wolcott, q. c. g., comp.
Lathe, 12x5 Pratt & W., q. c. g., col.
Lathes, Stark ¾" & ⅞" cap. with col.
Miller, No. 1 Kempsmith pl., comp.
Miller, No. 0 Brown & Sharpe pl.
Miller, Hardinge bench type, col.
Miller, No. 2 Becker, vertical.
Press, 30 ton Lucas straightening.
Press, No. 4 Consolidated, o. b. i.
Press, No. 78-C Niagara dbl. crank.
Punch press, No. 5 K.& K. o.b.i. 3"
Screw mchs., Nos. 4 & 3 Foster, w. f.
Shear, Quickwork, pwr. dri 14 ga. cap.
Spot welder, 19 kva Thom., 14" arm.

Planers, Lathes, Screw Machines, Air Compressors, Woodworking Machines.

MISCELLANEOUS WANTS

MACHINERY WANTED

Box 128, c/o Hitchcock Pub. Co., 508 S. Dearborn St., Chicago, Ill.

Double Seamer for 24 ga. steel barrels and casings. Capacity to seam both ends of a barrel 23" diam. by 36" long. Size Niagara No. 6 or equal.
Also Groover for Gordon or box side seam.

No. 12 Natco 22 spindle, No. 2 Taper arranged for motor drive.
No. 14 Colburn H. D. arr. for m. d.
No. 3 Garvin Duplex Mill.
No. 84 Gardner double end 22" disc Grinder, hyd. feed, m. d.
Moline Drills. several sizes.
No. 12 2-spdl. Pratt & W. gun drills.
3" Acme Bolt Cutter.
18" Graham Face Grinder.
No. 12 W.-F. Hot Trim Press, geared, side shear.
No. 58 Toledo Hot Trim Press, geared, side shear.
7½ h.p. U.S. Elec. Grdr. 24"x2" whls.
25 h.p. U.S. Buffing Mach. 3400 r.p.m.
No. 2 Allen S. Spdle. b. b. Drill Press.
No. 0 Giddings & Lewis Horiz. Boring Drilling & Milling Mch. S. P. D.
4½"x4½" Gardner Air Comp. m. d.

Send us Your Inquiries

AMERICAN MACHINERY COMPANY
5511 Euclid Ave., Cleveland, Ohio

NEW QUALITY—USED PRICES

Write for 1934 Complete Green List

BORING MACHINES, HORIZONTAL

No. 0 Giddings & Lewis, 3" bar.
No. 3-A Universal, 3" bar.
No. 350 G. & L. Floor Type.
5" bar Niles, Bement, Pond, Floor Type.

BORING MILLS, VERTICAL

56" Bullard "New Era".
42" Bullard "New Era".
42" King, one turret hd., one pl. hd.
54" Colburn, 1 pl. hd., 1 turret hd.
61" Bullard Maxi-Mill, 2 plain hds.

DRILLS, BALL BEARING

Allen, Avey, Henry & W., Edlund, Leland-Gifford, Sipp, 1 to 6 spdls.

DRILLS, MANUFACTURING

20" Cincinnati-Bickford, slid. head.
No. 2 Colburn, 1-2-4 spindles.
No. 14 Colburn, 2" capacity.
No. D-4 Colburn, 3½" capacity.
No. 121 Baker, M. D.
No. 317 Baker, M. D.
No. 10-D Moline Cylinder Borer.

DRILLS, RADIAL

3' American Maxi-Speed Sensitive.
4' Western Heavy Type.
5' American Triple Purpose.
6' American Full Universal.

GEAR CUTTING MACHINES

No. 3 & No. 12 Barber-Colman.
No. 9-H 12" G. & E. Hobbers.
No. 18-H 13"-30" G. & E. Hobbers
No. 36-H 18"-52 G. & E. Hobbers.
Nos. 7, 6, 61, 615 Fellows.
6", 18" Gleason Bevel Gear Gener.

GRINDERS, PLAIN

No. 1 Greenfield Hydraulic.
6"x32" Norton, motor drive.
No. 10, No. 11, No. 12 Brown & S.
10"x24", 10"x36", 10"x50", 10x72" Norton.
10"x20", 10"x36", 10"x52" Landis, m.d.
14"x36", 14"x72" Norton.
18x96" Norton Motor Drive.
20"x120" Landis, Motor Drive.
26"x96" Landis, Motor Drive.

GRINDERS, UNIVERSAL

No. 13 Brown & Sharpe.
No. 1, No. 2 Brown & Sharpe.
No. 2, 10"x25" Universal (Bath).
No. 2½, 10"x36" Universal (Bath).
No. 2-A 16"x32" Landis, Motor Dr.

GRINDERS, MISCELLANEOUS

No. 70 Heald Internal, Motor Dr.
14"x36" Pratt & Whitney, Model B.

MILLING MACHINES, PLAIN

No. 1-B Milwaukee, motor drive.
No. 2 B Milwaukee, motor-in-base, Timken bearings.
No. 2-M Cincinnati, single pul. dr.
No. 2 Cincinnati High Power, s.p.d.
No. 3 Cincinnati High Power, s.p.d.
No. 3-B Brown & Sharpe, s. p. d.
No. 3-B Milwaukee, single pul. dr.
No. 4-B Brown & Sharpe, motor dr.
No. 4 Cin. Hi Power, rect. overarm.
No. 5 Cincinnati High Power, s.p.d.
No. 5-B Brown & Sharpe, mtr. dr.

MILLING MACHINES, UNIVERSAL

No. 2 Cincinnati High Power, s.p.d.
No. 3 Cincinnati High Power, s.p.d.
No. 4 Cincinnati High Power, s.p.d.

MILLING MACHINES, VERTICAL

No. 2-M Cincinnati, motor drive, Timken Bearings.
No. 2 Cincinnati H. P., motor dr.
No. 3 Brown & S., sgle. pulley dr.
No. 3 Cinc. H. P. motor-in-base.
No. 4 Cinc. H. P. intermittent fds.
No. 5 B. & S., range 52"x12"x21".
No. 6 Becker. Motor Drive.

MILLING MACHINES, MFG.

No. 3 Garvin Duplex.
24" Cincinnati Duplex, s. p. d.
No. 33 26" Kempsmith Heavy Duty.
No. 3 36" Cinc. Hydromatic, M. D.

MILLING MACHINES, THREAD

4½"x12" Pratt & Whitney.
6"x14", 6"x48" P. & W. 3" spindle.

SCREW MCHES. & TURRET MCHES.

1½"x18" Cincinnati-Acme. Scr. Mch.
No. 4, 1 9/16" Brown & S. Scr. Mch.
No. 1-A W. & S. Univ. Turret Lathe
No. 2-A, 3½" W. & S. Turret Lathe.
No. 3-A W. & S. Univ. Turret Lathe.
No. 4-A W. & S. Univ. Turret Lathe.
18"-3 9/16" Libby Turret, m. d.
26"-7½" Libby Inter. Turret Lathe.
No. 4-L, 9½" Gisholt Turret Lathe.

Money-back Guarantee

HILL-CLARKE MACHINERY CO.

645 W. Washington Blvd., Chicago, Ill.

Guaranteed Machine Tools

Bargains with Safety

No. 2 Cinc. Centerless Grinders.
No. 16 Blanchard Vert Grinder.
No. 13 B. & S. Univ. & Tool Gr.
No. 20 Heald Vertical Grinder.
No. 2 B. & S. Surface Grinders (4).
No. 3 Abrasive Surface Grinder.
No. 33 Abrasive Surface Grinder
16"x48" Landis Crankshaft Gr.
62"x½" Stamco Gap Shear.
96"x3/16" Geo. Ohl Shear.
96"x3/16" Geo. Ohl Brake.
16"x6' L. & S. Gd. Head Lathe.
33"x12' L. & S. Cone Drive.
20"x10' Amer. Gd. Hd. Lathe.
24"x10' Amer. Gd. Hd. Lathe.
46"x28' Houston S & G. Lathe (2).
60"x50' Pond Lathe.
76"x40' Putnam Lathe.
16' H. & J. Plate Planer.
No. 2 Cincinnati Univ. Miller.
No. 2B Milwaukee Univ. Miller.
No. 3B Milwaukee Univ. Miller.
No. 2½B Milwaukee Vert. Miller.
No. 2 Cincinnati Vertical Miller.
No. 4 Cincinnati Vertical, Late.
14'—20' Niles Vert. Boring Mill.
42" Bullard New Era Ver. Turret.
44"—36" Niles Vertical Turret.
42" Gisholt Vertical Boring Mill.
Lucas Horiz. Boring Mill, 3" bar.
1½" Ajax Upsetter & Forger.
24" G. & E. Shapers.
No. 2A W. & S. Turret Lathes (2).
No. 1B Foster Grd. Hd. Turret.
No. 21½ Bliss Incl. Power Press.
No. 6 Consolidated Incl. Press.
10" Dill Slotter.
No. 1 Baker Keyseater.

Seven Carloads Just Received

Priced to sell Immediately

No. 6 Whitney Hand Millers (2).
Superior Hand Millers (3).
No. 2 Becker Vert. Millers (2).
No. 4B Becker Vert. Miller.
No. 5C Becker Vertical Miller.
No. 1 Kempsmith Pl. Millers (2).
No. 4 Hendy Plain Millers (2).
No. 2 Knight Milling & Drilling.
No. 2 Garvin Duplex Miller.
12"x5' Pratt & Whitney Lathes.
No. 70 Heald internal Gr. (3).
No. 75 Heald Internal Grinder.
10"x20" Landis Cylinder Grinder.
12"x36" Landis Cylinder Grinder.
No. 20 Gardner Dbl. Disc Grinder.
1" Millholland Screw Machine.
1" Pratt & Whit. Screw Machine.
1½" Pratt & Whit. Screw Machine.
No. 2 W. & S. Fox Monitor.
No. 4 W. & S. Universal Turret.
No. 52 National Acme Auto. Screw
500 lb. Yoder Trip Hammer.
Yoder Rotary Slitter, 36" Throat.
12" G. & E. Gear Hobber.
No. C-3 Ferracute Incl. Presses (2)
Ing. Rand Air Comp. Type 14.
Gasoline Driven Gen. Sets (2).
Wood working machinery.
Many others.

SPECIAL OFFERING

No. 13 B. & S. Heavy Duty Gear Cutters, Capacity 24"x6" (2) New.

Every Machine Located In Our Warehouse

Kennard-Rafkin Machinery Corp.

224-230 Culver Ave., :-: Jersey City, N. J.

QUALITY TOOLS

GEAR HOBBERS

Nos. 18H & 24H G. & E.
No. 12 Barber Colman.
16" Cincinnati.
No. 5A Lees Bradner.

GRINDERS

6"x18" Landis.
6"x32" Norton.
8"x20" Fitchburg.
10"x24" B. & S. No. 1 Univ.
10"x24" Norton.
10"x36" Landis.
12"x40" B. & S. No. 3 Univ.
14"x72" Nor on.
No. 72 Heald, hyd. feed.
No. 10 Blanchard surface.
Pratt & Whitney worm.
30"x84" Diamond face.

LATHES

12"x6' & 18"x8' Hendey.
14"x6' & 16"x6' Monarch.
14"x6' Cisco geared head.
16"x10' American.
18"x8' Cisco geared head.
19"x10' Sidney.
20"x8' Lodge & Shipley.
22"x10' Davis.
24"x12' Milwaukee.
26"x14' Putnam.
48"x19' American, geared head.
50"x16' Pittsburgh.

TURRET LATHES

24", 34" & 36" Bullard.
Nos. 4, 6 & 3A Warner & Swasey.
No. 2, 3 & 4 Foster.
2½" & 3" Jones & Lamson.
1½" & 3½" Cincinnati Acme.
1" & 1½" Milholland.

MILLERS

Nos. 2, 3 & 4 Cincinnati.
Nos. 1½AS, 2B & 3B K. & T.
Nos. 1½, 2 & 2½ Rockford.
Nos. 1½, 2 & 3 Brown & Sharpe.
No. 1½ Rockford universal.
No. 2½ LeBlond universal.
No. 3 Kempsmith universal.
Nos. 2 & 4 Cincinnati vertical.
No. 13B Mfg. Brown & Sharpe.
24" Cincinnati duplex.
24" & 48" Cincinnati automatic.
48" Newton rotary.

PLANERS

24"x24"x6' Woodward & Powell.
28" Lynd Farquhar openside.
30"x30"x8' Cleveland openside.
30"x30"x8' Gray.
30"x30"x12' Cleveland openside.
32"x32"x12' Niles.
36"x36"x8' Gray.
36"x36"x10' Cincinnati.
36"x36"x12' Cincinnati.
36"x48"x12' Cleveland openside.
48"x48"x10' Liberty.
72"x60"x14' Cleveland openside.

PRESSES

48", No. 92½C Toledo double crank.
No. 165 Toledo toggle.
800 ton Bliss coining.
150 ton Ferracute coining.
No. 67 Consolidated s. s.
No. 56 Toledo s. s.
No. 74½ Bliss s. s.
No. 8-7 Zeh & Hahnemann.
Nos. 3, 5A & 6 Toledo O. B. I.
No. 3 Consolidated O. B. I.
No. 6 Adriance O. B. I.
No. 76 Toledo open back.

SHAPERS

20" & 24" Gould & Eberhardt.
15" & 24" Potter & Johnson.
16" & 20" Milwaukee.
16" & 28" Ohio.
16" Kelley.
28" Columbia.

WELDERS

175 amp. Westinghouse arc.
200 amp. General Electric arc.
150, 200 & 300 amp Zeus arc.
10 K. W. Thompson spot.
20 K. V. A. Winfield spot.
20 K. W. Toledo spot.
47 K. V. A. Taylor spot.
20 K. W. Moesta gun welder.
15 K. W. Taylor auto spot.
10 K. W. Federal Jr.

1500 Tools in Stock. Send for List.

MILES MACHINERY COMPANY
Saginaw W. S., Mich.

High Grade Machine Tools

Lathes

48"x30' Lodge & Shipley Sel.Grd.Hd.
54"x24' H. S. & G. Grd. Hd. M. D.
24"x22' Bradford, Q. C., 3 S. C. D.
36"x16' Lodge & S. Sel. Grd. Hd.
30"x16' L. & S. Patent Grd Hd.
24"x14' Lodge & S. Sel. Grd. Hd.
24"x12' L. & S. Patent Grd. H.S.P.D.
16"x10' Lodge & S. Sel. Grd. Hd.
18"x8' Lodge & S. sel. grd. hd., a. p. d.
30"x10' Lodge & Shipley, 3 S. C. D. D. B. G. Q. C.
20"x8' Am. Grd. Hd., M. D., late t.
20-30"x7' Monarch Helical G.H.Gap

Grinders

Type A Production Abrasive Finishing
Nos. 50, 55, 60, 65 and 70 Heakls.
6"x18" Landis Plain, Self Contained.
No. 11 Brown & Sharpe Plain.
10"x52" Landis Plain, Self Con.
Rivett Internal Grinder.
No. 2 Brown & Sharpe Surface.
Nos. 1½ Cincinnati Tool & Cutter.

Gear Cutters

No. 1 Brown & Sharpe Gear Tester.
No. 12 Barber-Colman Hobber, dbl. overarm, late type.
No. 13 B. & S. Bevel and Spur.
36BM Gould & E. Gear Rougher.
No. 3, 26" Brown & S. Gear Cutter.
Nos. 1, 2, 4 Adams Farwell Gear Hb.
18-H Gould & Eberhardt Hobber.
6", 11", 18" Gleason Gear Generators.

Bolt and Pipe Threaders

½" Landis Double-Spindle.
1½" Landis Sgl.-Sp., Grd. Hd. m. d.
1" Acme Class "A" Single-Spindle,
2" Landis Sgl.-Sp., lead screw attach.
2" Landis Double-Spindle.
18" Landis Pipe Threader.

Boring Mills

24"; 36" and 42" Bullard "New Era" A. C. motor drive.
60" Niles Boring Mill, 2 heads.
84" Niles Vertical, motor drive.
No. 32 Giddings & Lewis Horiz.

Milling Machines

No. 2 Van Norman Duplex Miller.
No. 5 Cincinnati High Power, Rectangular Overarm.
No. 4 Cincinnati H. P. Pl., S. P. D.
3B Milwaukee Plain Miller, D. O.M. Single Pulley Drive.
No. 2-B & 3-B Milw. Pl., Dbl. O. A.
No. 4-A Brown & Sharpe Universal.
Nos. 3; 5-B; 6 Becker Vertical.
No. 3 Cincinnati Vert. H. P., S.P.D.
Nos. 2 and 3 Cincinnati High Power Plain. S. P. D. flange nose.
No. 2 Cincinnati Universal H. P. flange nose: S. P. D.
5" Pratt & Whitney Automatic.
18" Cincinnati Plain Mfg. Miller.
Briggs Manufacturing Miller.
No. 33 Kempsmith Automatic.
No. 7-H Becker Lincoln type.
No. 1 Knight Miller and Driller.
6x48 Pratt & Whitney Thread Miller.
4½x12 Pratt & Whitney Thread Miller
No. 3 & 3-E Lees-B. Thread Millers.
Hanson Whitney Thread Miller.

Planers

24"x24"x8' Gray Planer.
36"x36"x10' Gray, 2 heads.
36x48"x10' Liberty Openside.
48"x48"x16' Detrick & H. Openside.

Radial and Upright Drills

3' American Triple Purpose, S. P. D.
2½' Cinti-Bickford Radial, S. P. D.
2½, 3, 3½, 6' Cinct.-Bick. S. P. D.
3, 3½, 4 American Trip. Pur. S.P.D.
No. 2 Colburn Mfg. H D. 2-spindle.
6-spindle Rockford 20" B. G. P. F.
No. 40 Natco Straight Line Multi.

Shapers

16", 20", 24" G. & E., mtr. dr. thru g b.
16", 20" and 24" G. & E., cone drive.
20" Steptoe, S. P. D.
24" Potter-Johnson M D. thru gear box
24" Cinti. h. d. mtr. dr. thru gear box.

Miscellaneous

3x3x½ Bertsch Angle Bending Roll.
No. 3-B LaPointe Broaching Mche.
25 ton Henry & Wright Dieing Mche.
80 lb. Bradley Cushion Helve Hammer
Nos. 1 & 3 Baker Keyseating Mches.
No. 2 Mitts & Merrill Keyseater.
Nos. 1 & 2 Davis Keyseaters.
6 spindle ⅝" Acme Nut Tapper.
V-18 Amer. Vert. Broaching Mche.
15, 30 & 50 Ton Lucas Forcing Pr.
No. 43 Robinson Dbl. Crk. Grd. Press.
Dwight Slate Marking Machines.
No. 50 Toledo Arch Press, 10" stroke.
Wickes Punch & Shear, 48" throat, 1¼" thru 1½".
No. 1 & 2-X Garvin Tapping Mches.
No. 4 W. & S. Univ. Turret Lathe.
100 K. W. Federal Butt Welder.
Shuster Wire Machines; 3/16" & ½".

Write for Complete Catalogue—We Buy, Sell and Exchange

Cincinnati Machinery & Supply Co., 28 West Second St., CINCINNATI, OHIO

Latest Type, Equal to New Machine Tools

Automatics:
Gridley ⅞" Model "G"
National Acme 1x5.
National Acme 1⅜".
National Acme 2⅝".
Cone 1¼; 2¼".
B. & S. No. 0; No. 00; No. 2.

Grinders:
Landis 6x18, 10x36, 10x52, 10x72, 10x96" plain.
Norton 10x72; 18x96; 18x120.
Landis, No. 3 Universal.
Heald No. 50, 72, Hydraulic.
Heald No. 60, 65 and 70 Internal.
Heim Centerless.

Lathes:
From 12" to 60" swing.
150 machines in stock.

Boring Mills:
Lucas No. 31 Horizontal.
Bullard 61" Max-mill.
N. B. P. 100" Heavy Duty 2 heads.
Cincinnati 96", 2 heads.
Bullards 24", 36", 42" New Era.

Gear Cutters:
Gleason 15" Spiral Finisher.
Gleason 15" Roughing Machine.
B. & S. 3, 4, 5 and 6.
Gould Eberhardt 72x12.
Fellows No. 6, 61, 615 and 65.
Fellows No. 7, 75.

Milling Machines:
Cincinnati No. 2, 3, 4 Horizontal.
Cincinnati No. 2, 3, 4 Vertical.
Ingersoll 48x48x16' 4 hd. adj. rail.
Kearney & T. No. 3B dbl. overarm

Over 1000 other tools—send us your inquiries.

MOREY MACHINERY CO., Inc.

410 Broome Street, :-: New York, N. Y.

MILLING MACHINES

Plain and Universal

1—No. 2 Brown & Sharpe Cone Drive Universal Miller, with c/s.
1—No. 2 Cincinnati Single Pulley Drive Plain Miller.
1—No. 2A Mfg. Type K. & T. Plain Miller, double over-arm, single pulley drive.
1—No. 3 Brown & Sharpe Cone Drive Plain Miller, taper nose with c/s.
1—No. 4-B Heavy Brown & Sharpe Plain Miller, taper nose, sgl. pul. dr.
1—No. 3 Cincinnati Vertical Spindle Miller, single pulley drive.
1—No. 4 Cincinnati Vertical High Duty Miller, single pulley drive.
1—No. 6 Becker Vertical Miller, belted motor drive, with motor.
1—18" Cincinnati Lincoln Type Automatic Miller, single pulley drive.
1—No. 2 Garvin Double End Spline Miller with c/s.
1—No. 3 M. & C. Hand Miller mounted on column.
1—No. 1 Bristol Hand Miller, roller back shaft.

WE CARRY A FULL STOCK OF USED MACHINE TOOLS—

Your inquiries will be appreciated.

The Strong, Carlisle & Hammond Co.

1392 West Third St.
CLEVELAND, OHIO

2832 East Grand Blvd.
DETROIT, MICH.

Modern Machine Tools

DRILLS

2½', 3' Carlton Sensitive Radial.
3', 4' American Sensitive Radial.
3' Foadick Sensitive Radial.
2½', 3', 4', 5', 6', 7' American Tri. Pur. Pl. Radial Drills, gear box dr.
3', 3½' Morris Pl. Rad., gear box dr.
3½', 5 Cinti-Bick. Pl. Rad., g. b. dr.
4' Dreses Plain Radial, gear box dr.
4' Foadick Plain Radial, gear box dr.
5', 6' Amer. Tri. Grd. Pl. Rad., g b. dr.
7' Foadick Plain, cone pulley drive.
21", 24", 28", 36" Cin.-Bick. Upr.
26" Barnes all geared.
21", 25" Weigel Upright.
20", 21", 24", 32", 36" Aurora Upr.
D2, D3, D4 Colburn H. D. Upright.
Nos. 121, 216, 220, 310, 314 Baker H. D. Upright.
No. 25 Bausch Multiple.
No. 30 Natco Multiple.
5 sp. No. 2 Detroit Horizontal.
6 sp. No. 2 Avey H. S., power feed.
Allen, Avey, Henry & W., Leland & Gifford, Demco, Sipp H. S. ball b.

MILLING MACHINES

No. 5 Cincinnati Universal, rect. overarm, motor drive.
No. 1 Cleveland Univ., cone pulley.
No. 1B LeBlond Universal, cone pul.
No. 1½ Brown & Sharpe Univ., c. p.
No. 3A Owen Universal, c. p.
No. 3 Ohio Universal, c. p.
No. 3A hvy., 4A B. & S. Univ., m.d.
No. 1½, 2½ Milwaukee Vert. m. d.
No. 2, 3, 4 Cincinnati Vertical, m. d.
No. 3, 5, 6 Becker Vertical, c. p.
No. 3V Toledo Vertical.
Becker Vertical Continuous Miller.
No. 3 Sundstrand Rigidmill, s. p.
No. 21 Brown & Sharpe Auto., s. p.
No. 33 Kempsmith Production, s. p.
14", 28" Cincinnati Semi-Auto. Dup.
24" Cincinnati Automatic Duplex.
18", 24", 48" Cincinnati Plain Auto.
48"x42"x8' Ingersoll Planer Type slab.
4" Pratt & W. spline miller, arr. m. d.
6x14", 6x80" Pratt & W. Thread.
10", 12" Pratt & Whitney Automatics.
No. 3, 3C Lees-Bradner Thread.
No. 1M, 2, 3, 4, 5 Cincinnati Plain, s. p. d. and m. d.
No. 3B, 3B Heavy, 4B Heavy, 5B Heavy Brown & Sharpe Plain, m. d., late type.
No. 5 Cincinnati Plain, rect. overarm.
No. 1½BS, 2B, 2BS, 3B Milwaukee Plain, double overarm.
No. 13B Brown & S. Pl., latest type.

ENGINE LATHES

14"x14' American grd. hd. m.d. in leg.
14"x6' Hendey Yoke Head.
14"x8' Read-Prentice, geared head.
16"x8' LeBlond, cone.
18"x8' Hendey Yoke Head.
18"x8' Lodge & Shipley, sel. hd., tap.
18"x8' American, geared head.
20"x8'—10' American, geared head.
24"x10'—16' American, geared head.
24"x10' Greaves-Klusman, cone.
27"x16' American geared head, taper.
30x"x12'—14' Lodge & Shipley, cone.
36"x14'—18'—28'—40' Amer., g. h.
36"x18' American, cone.
23"x10' LeBlond geared head, m. d.

PRESSES

No. 206B Toledo D. C., geared.
No. 92½C Toledo D. C., geared.
No. 90E Toledo D. C., flywheel.
No. 83C Michigan D. C., geared.
No. 35 Toledo Geared, Stiles type.
No. 3 Toledo O. B. I.
No. 400, 600 Perkins O. B. I.
No. 4A, 5A Willard O. B. I.
No. 32P, 33 Toledo Upright.
No. 1, 2 Consolidated O. B. I.

GRINDERS

No. 94 Bridgeport Heavy Duty Face, oil gear table dr., a. c. m. d., motors.
No. 2 Diamond Auto. Surface.
No. 2, 3 Wilmarth & M. Auto. Surf.
No. 255—12" Heald Rotary Surface.
No. 33 Abrasive Vert. Surf. mtr. in base
No. 1, 2, 3, 4 Brown & S. Universal.
No. 13 Brown & S. Univ. & Tool.
No. 1½, 2 Cincinnati Tool & Cutter.
10x36" Landis Plain, m. d.
10x36", 16x36", 12x72" Norton Pl.
No. 70 Heald Internal, clutch head.
No. 60, 65 Heald Cylinder.
No. 70, 75 Heald Internal.
No. 51 Besly Motor Driven Disc.
No. 120 Gardner Disc.
Springfield swing frame Emery, m. d.
Bridgeport h. d. Emery, b. b.

Write for Our List No. 34.

THE EASTERN MACHINERY CO.

3265 Spring Grove Ave., CINCINNATI, OHIO

Swagers; Etna & Langelier, 1" 1½", 2" and 4" tube capacity.

Knife Grinder, 156" Bridgeport, motor drive	$ 1,500.
Boring Mill, 12" Betts Vertical	1,900.
Boring Mill, 5" bar Detrick & Harvey Hocizontal Floor	1,150.
Bulldozer, No. 5 Williams & White, 20" stroke	750.
Drill, No. 5½ Foote-Burt 6-spindle Rail, 3" cap.	1,700.
Keyseater, No. 3 Baker Bros., cap. 24" long x2⅜" wide	575.
Planer, 60"x60"x16' Detrick & Harvey Openside	2,750.
Press, No. 92-B Toledo Double Crank, Geared, 36" wide	800.
Press, No. 14 Bliss Toggle Drawing, tie rod, 12½" liftout	4,500.
Shaper, 24" and 32" G. & E. Crank, motor drive with motor	
Shear, 12"x10 gauge Niagara Power Squaring	1,050
Turret Lathe, 26" Libby, 7⅜" hole thru spindle	2,250

D. C. Oviatt & Co., 2170 Lakeside Ave., Cleveland, O.

No Risk—Completely Rebuilt

10' Betts vertical Boring Mill, geared feeds, motor drive.
3½" Bar Universal table type boring mill.
20" Smith & Mills S. P. D. shaper.
No. 2M Cincinnati Universal Miller, rectangular arm.
16"x8' Lodge & Shipley selective type geared head.
16"x72" Landis Crankshaft grinder.
Radial drills, all sizes, screw machines, etc.

Send for Complete Stock List.

Iroquois Machinery Co., No. 660 Ohio Street, BUFFALO, N. Y.

Bargains In NEW H. S. Cutters

	Size	Net Price		Size	Net Price
H. S. Slitting Saws	3x1/32x1	$1.19	H. S. Side Cutters	2¾x½x1	$3.00
" " "	5x3/32x1	2.20	" " "	2¾x5/16x1	2.60
" " "	7x3/32x1	4.00	" " "	4x½x1	4.50
" " "	3x3/32x1	1.19	" " "	4x5/16x1	3.50
" " "	3x⅛ x1	1.26	" " "	5x5/16x1	6.00
" " "	3x3/16x1	1.19	" " "	5x1x1	8.00
" " "	4x3/64x1	1.59	" " "	5½x½x1	6.50
" " "	4x3/16x1	1.98	" " "	5x¾x1¼	7.00
" " "	3x1/16x1	1.22	" " "	2¾x¼x⅛	2.25

VICTOR MACHINERY EXCHANGE, 251 Center St., New York N.Y.

72" N. B. P. Vert. Boring Mill, M.D.
6" Oster Pipe Mch. with dies, B. D.
Pigman Alligator Shear, cap. 1¼".
18"x8' L. & S. Geared Head Lathe.
26"x11' Wickes D. B. G. Hvy. Duty
20"x10' Bradford D.B.G. Lathe, MD
B-2 Nazel Air Ham. cap. 3" sq. M.D.
No. 4 B&S Univ Miller, div. H&T st.
No. 3 H&J dbl. angle Sh., cap. 6x6x1".
No. 5 H&J Beam Punch, cap. 30" beams
No. 1 Tol-do O. B. I. Press.
250 lb. Little Giant Pwr. Ham., M.D.
Lennox Rotary Bevel Shear, ¾" cap.

50" Bertsch pw. Sh. 16" gap, 3/16" cap.
80" Bertsch Bend. Rolls, 5/16" cap.
No. 2 Cleveland Univ. Miller, S.P.D.
10' Garrison Pow. Press Brake, 16 ga.
8' Keene hand brake, cap. 16 gauge.
No. 5 H. J. S. E., Punch 62" th. cap ½1".
32" Cinc. M. D. Heavy duty shaper.
36" Bullard Ver. Miller, 2 hds. B. D.
42"x10' D. & H. Openside Planer.
No. 3 B. & S. Cut. & Ream. Grinder.
9½x12" Worth. Air Comp, cap. 185 c.f.
16"x72" Landis Crankshaft Grinder.
No. 12 Natco 12 spdl. Multi Spdl. Drill.

Russell Machine Co., 1447 Oliver Bldg., Pittsburgh, Pa.

New 3 Phase Motors at Low Prices

LATHES

14"x6' Monarch, quick change.
16"x8' Hamilton, quick change.
17"x 8' LeBlond, quick change.
24"x14' LeBlond.

TURRET LATHES and SCREW MACHINES

Automatic, National-Acme. 1⅝" cap. Smurr & Kamen.
21" & 24" Gisholt, ⅝" capacity. Acme, like new.

SHAPERS

15" ribbon mill, motor drive.
24" Rockford, back geared.

DRILLS

Baush No. 1, multiple spindle.
32" Hoefer, sliding head.
6' ceiling.
No. 66D Moline hole hog.

MILLING MACHINES

No. 1½ American plain.
No. 3 Brown & Sharpe Universal.
18" Cincinnati automatic.
No. 5 Becker vertical.

MISCELLANEOUS

Band saw, Clark, compound.
Band saw, Napier 10"x10".
Gear miller, No. 1 Bilton.
Sand Blast, Boland.
Shear, Loy & Nawrath 3/16" cap. 10'.
Shear, Pettingell, 60" throat.

THE OSBORNE & SEXTON MACHINERY COMPANY
Dept. H.
COLUMBUS OHIO

In Stock! Ready To Ship!

Automatics, B&S #00, #0, #2, #2G; #52 Acme 4-sp. Serials over 12,000; Gridleys ⅜" & 1¼" m. d.

Bending Rolls—Drop End, Pyr. 10' ⅜"; 10 ½"; 8 ⅜"; 36" 16; 42" 10; 48" 16; 8' 10; Angle #0 Kling 2x2x¼".

Brakes, Chgo. Steel hand, all sizes. Box & Pan, 4 & 6' Hand; 5' 10 ga. Power 8" fingers; 6' 10; 10' 10; 10' 3/16"; 10' ¼"; Press Brakes—10' 3/16"; 10' 5/16".

Gang Punches, Ferracute 8', 10', 15', 16'; Stoll 6' with Sub Presses.

Lathes, q. c. g., 16x6 Amer. g. head., Bradford 18x8; 18x12'; R.-L. 32"x 20' B. & E. Turret, No. 3A W. & S. Univ. (2).

Millers, #2B Milw. spd.; #2 Kemp; #4 Cinc.; #2 B. & S.; Boring, 52" m. d.; 3½" Hor. 8' bed.

Miscellaneous, Univ. Iron Worker, m.d. 4x4x¼" angles; Schatz, 6x6x⅜ angles, m. d.; Grinders, #3 abras. sur., mag. ck.; Tumbling Barrels, Sly (2) 36"x72"; Folders, 20", 30", 36", 42"; Beader & Flanger #334-A Toledo: Beading Machine, Toledo #382; Saws, Peerless Shap. m.d.; #1 Klem Band; Threaders, 1" Landis; ⅜" Geometric.

Presses, Dble. Crank Toledo #90-B 36" bet.; 91-D 42" B. G. 54" str.; #92-C 42", 4" str.; #92-G 66" 5" str.; Horn., #16 & #39 Bliss; #14 Nia.; #42-A Toledo; **OBI,** #5G L.-J., 5" st., bg., m. d.; #1 L.-J. 1½", 2½" st. (7); #1½ Cons.; #3 Minster; #18 & 19 Bliss: #0 L.&J. m. d.; #75½ Bliss; 500 Ton Emboss. Press; #2 W Bliss Wiring; #69-N Bliss Cam Drawing; #17 Toledo.

Roller Die Mches., 10 spindle m. d.; 5 spindle; 3 spindle.

Shapers, 7" Rhodes; 16" S. & M.; 20" Ohio; 24" Stockbridge.

Square Shears, Pwr., 6' Stoll, 10 ga., 20 gap; 8' Bertch, 3/16-18" gap md; Nia. 8'14, 12'14, 52"18, 36"18, 52"10 ga. 15" gap; 48" Toledo 16 ga. 15" gap; 36" 3/16" Stoll, Throatless, 16 ga.; 10 ga.; ¼".

Welders, Spot: A. E. F. 15 kw., 12 kw. 9 kw.; Thomson 25 kva, 17 kva, 10 kw.; Federal 30 kw., 12 kw. ARC-300 West., 350 Gibb. ac. Flash and Mitre, Federal, 25, 6½, 75 kw.

Middle-west's Most Complete Stock of Sheet Metal Machinery.

Interstate Machinery Co., 130-2 So. Clinton St., Chicago

Wood-Working Machinery
Bought, Sold and Exchanged
Largest Stock in United States
Terms if Desired
Write us
J. LEE HACKETT COMPANY
5858 Commonwealth Avenue, Detroit, Michigan

Beaman & Smith Horizontal Drilling, Milling and Boring Machine.
Gisholt Horizontal Boring and Drilling Machines.
Baker 24" H. S. Power Drill.
16x72 Landis Self-Contained Grinder.
72A3 Heald Airplane Cylinder Grinder.
Gray and Pond Planers—Milling Machines.
Newark Gear Cutters.
Warner & Swasey.
Gisholt Turrets.

WE HAVE A COMPLETE LIST OF MACHINERY AND EQUIPMENT

SEND US YOUR REQUIREMENTS FOR QUOTATIONS

THE EQUIPMENT & MATERIALS CO.
139 N. CLARK ST., CHICAGO, ILL.

Buy from Atlas and Save Money

Air Compressors, 14x7½x10, 9x9, dbl. Cyl. 9x8, 6x4½ DC to 2½ HP. AC motor, 4½x4½.
Boring Mill, Giddings & Lewis No. 0, 3½" bar.
Cold Saw, Cochrane-Bly No. 4B.
Drill, Edlund 2B 3-Spindle B.B.
Drill, Avey 6-Spindle.
Drill, Cincinnati 32" Tapping Att.
Drill, Cincinnati 22" Tapping Att.
Gear Millers, Auto. Bilton No 1½.
Grinder, Cyl., Morse No. 2 Univer.
Hoist, Electric, Shephard 3 ton.
Hacksaw, Power. Peerless H.S. 9x9.
Lathe, LeBlond, 16"x6' Q.C., D.B. G., Tapper Attach.
Lathe, Gleason 40"x16', h. d., d.b.g.
Lathe, Mulliner & Edlund 12"x6' qc.
Lathe, Amer., 16"x6', g.h., m.d., q.c.
Lathe, Hendey, 16"x6', q.c.
Lathe, Amer., 20"x8', q.c., taper att.
Lathe, Sidney, 19"x6', q.c., d.b.g.
Lathe, Hendey, 16"x6', g.h., m.d., q.c.
Lathe, Cinc., 18"x8', q.c., d.b.g.
Lathe, Willard, 16"x8', g.h., m.d.
Miller, Kempsmith No. 3 Univ.
Miller, Becker Model C, vert.
Shaper, Potter & Johnson 20", Univ.
Shear, Quickwork, 30" to 60" throat.
Turret Lathe, W. & S. No. 4 Univ., g.h., s.p.d. collets, chucks, tools.
Turret Lathe, Pratt & Whit. Univ., 1½" cap. with collets.
Turret Lathe, W. & S. No. 2.
Welder, Acme 9 K.W.
Welders, Thompson 18 K.V.A. Butt
Lathe, Bradford Double End Axle, hole in driv. head 8", 8x8 centers.
Milling Machine, B. & S. No. 2H.
Punch Press, Bliss Consolidated, o. b.i., No. 1,2,3,4; Wells No. 8 o.b.i.
Shear and Angle Cutter, Lennox 3A Combination.
Radial Drills, Fosdick 2½'.
Radial Drill, Fosdick 6'.
Shaper, 16" B.G. Cincinnati.
Complete Line Electric Motors and Generators.

Machinery bought, sold or exchanged—1 piece or an entire plant

ATLAS EQUIPMENT CO., 114 So. Clinton St., CHICAGO, ILL.

Liquidation Bargains

Finest Tool Shop in Chicago Area

No. 1A and No. 2 Special P. & W. Jig Borers, motor drive.
24x16 Boye & Emmes Lathe.
2—1" Hardinge Bench Lathes.
No. 3 & No. 4 Cincinnati Hi Power Vertical Miller S. P. D.
No. 5 Gallmeyer & Livingston Surface Grinder M. D., hydraulic feed.
36" Bullard Vertical Boring Mill.
No. 1 and No. 3 B. & S. Univ. Cylindrical Grinders.
No. 5 Foster Screw Mchc. all pwr. fd.
No. 5 Greenard Arbor Press.
20" and 24" G. E. Shapers.
5' Dreses Radial Drill, S. P. D.
2" Cleveland Automatics.
No. 2½ Rockford Plain Milling Mach.
No. 3 Becker Vertical Miller M. D.
No. 5 & 5B Becker Vertical Millers.
No. 0 & 00 B.&S. Auto. Screw Mach.
5 Spdl. Davenport Automatics ½" cap.
36x36x12' Planer.
No. 4 W. & S. Univ. Screw Mach.
20" Ohio Shaper.
3' Mueller Radial Drill, S. P. D.
C52 Ferracute Horn Press.
No. 2 Toledo O. B. I. Punch Press, arr. for M. D.
No. 19 Bliss Punch Press.
Peerless Double Hopper Eyeletting Machines, M. D.
10 K. V. A. Taylor-Winfield Spot Welder.
5 K. W. New Dyer Spot Welder.
4' Dreis & K. finger brake, 8" fingers.
6' Bertsch Power Gap Shear, 3/16" cap. with 18" gap.
4 sp. Henry & Wright b. b. Drill
23" Rockford S. H. B. G. Drill Press with tapping attachment.

Victor Machinery Company

128 S. Clinton Street, Chicago, Illinois

SOME HEAVY PRESSES

No. 727⅝ Hamilton Double Crank Press, 72" bet. housings, 10" stroke, motor 440-3-60, used 4 months.
No. 80½ Bliss Triple geared press, 20" stroke, 15" shaft.
No. 4822 Hamilton Double geared press, 20" stroke, 15½" shaft, motor drive.
No. 3110¼ Hamilton Double grd. presses, 12" str., m. d. (2).
No. 78½ Bliss Press, 16" Stroke, 55½ shut height, trp. grd.
No. 78½ Bliss Press, eccentric shaft, 10½" at bear., 20" at crank.
No. 26 Hamilton Horn press, with table, geared, a. c. m. d.
No. 7 and 10 Zeh-Hahneman Percussion Presses.
14" P. & W. Vert. Surface Grinder, model 2B, mag. chuck.
No. 6 Becker Vertical Grinder, rotary table.
Nos. 00G & 2G Brown & Sharpe Automatics.
½"-⅞"-5½" Cleveland Model A Automatics.
6"x32" Norton Plain Grinders.
8', 3/16" cap. Chicago Leaf-type Brake.
8" Sundstrand Stub Lathes, a. c. motor drive.

Lots of Other Good Machines

A. D. White Machinery Co., 108 N. Jefferson St., CHICAGO, ILL.

SIMMONS-MCH-TOOL-CORP.

Albany, N.Y.—Jersey City, N.J.

Cable Address—SIMMONS

A Few Of Our 2,000 Machines

No. 5 Cincinnati Plain Millers (3).
No. 5 Cincinnati Universal Miller.
No. 2-A Brown & Sharpe Univ. (3).
8' American Triple Purpose Radial.
7' Cincinnati-Bickford Plain Radial.
3' American Triple Pur. Radials (5).
72"x58' Niles-Bement Pond Lathe.
48"x50' Niles-Bement-Pond Lathe.
30"x22' American Geared Hd. Lathe.
16"x6' L. & S. Tool Room Lathes (9).
10'x8'x20' Cincinnati Planer.
72" Bement Rotary Planer.
42"x42"x10' Cleveland Openside.
1¼" Gridley Model G Auto. (8).
No. 31 Lucas Horizontal Boring Mill.
16' Niles hvy. duty vert. Boring Mill.
14' Niles hvy. duty vert. Boring Mill.

Ask for current list and catalogue

Need some good tools? Let us quote you.

Simmons Machine Tool Corp.

ALBANY JERSEY CITY

GRINDERS

No. 16 Blanchard Vertical Floor, Motor Drive, 26" Magnetic Chuck.
36"x144" Norton Brand New Plain Grinder.
24"x144" Landis Plain Grinder.
16"x48" Landis Crankshaft.
No. 65 Heald Cylinder.

BORING MILLS

16' Extension Type to 20' Niles.
12' Niles Bement Pond.
84" Cincinnati.
72" Niles Bement Pond.
72" Gisholt.
64" Bullard Maxi Mill.
61" Bullard Maxi Mill.
60" Gisholt.
54" Colburn.
42" Niles Bement Pond.
42", 36", 24" Bullard New Era Types.

MILLING MACHINES

No. 5 Cincinnati Rect. Overarm.
No. 5, 4, 3, 2 Cincinnati, Plain.
No. 4 Cinc. Vert. Intermit. Feeds.
No. 3, 2 Cincinnati Vertical.

LATHES

36"x30' Simplex Geared Head.
36"x16' Fitchburg Cone.
27"x16' American Geared Head.
24"x14' Lodge & Shipley Grd. Hd.
20"x10' American Geared Head.
16"x8' Lodge & Shipley Grd. Hd.

MISCELLANEOUS

120"x96"x20' Cincinnati 4 Head Planer. Forced Feed Lubrication. Power Rapid Traverse.
96" Gould & Eberhardt Gear Hobber.
6'-5' American Triple Purpose Plain Radial Drills.
10" Pratt & Whitney Vertical Shaper.

Sun Machinery Company, Inc. 45 Van Buren St., NEWARK, N. J.

Index of Advertisers

A

Abart Gear & Machine Co. 13
Acme Industrial Co. 11
American Machinery Co. 41
American Tool Works, Inc. .....
Anderson Bros. Mfg. Co. 24
Armstrong Bros. Tool Co. 12
Armstrong-Blum Mfg. Co. 9
Atlantic Company, The 5
Atlas Equipment Company 50
Atlas Press Co. 15

B

Baumbach Mfg. Co., E. A. 20
Bernstein & Co., Geo. M. 34
Bleser Mfg. & Mchy. Co. 40
Boston Gear Works Inc. 16
Bradley Machinery Co. 4-14
Brown Machinery Co. 37
Brownell Machinery Co. 36
Brotherhood & Son, Percy M. 34
Burke Machine Tool Co. 22

C

Carroll & Son, Wm. .....
Chicago Wheel & Mfg. Co. 28-29
Cincinnati Mchy. & Supply Co. 45
Cullman Wheel Co. ..... Back Cover

D

Davis Machinery Co. 41
Dreis & Krump Manufacturing Company ..... Front Cover

E

Eastern Machinery Co. 47
Eisler Engineering Co., Inc. 9
Elyria Belting and Machinery Co. 36
Equipment & Materials Co. 50
Esley Machinery Co., E. L. 40

F

Foote-Burt Co. ..... Inside Back Cover

G

Graham Manufacturing Co. 25
Grant Mfg. & Machine Co. 23

H

Hackett, J. Lee 50
Hartford Special Machinery Co. 13
Harvey Mfg. Corporation 14
Heuser Manufacturing Co. 22
Hill, Clarke Machinery Co. 42
Hotel Gibson 10

I

Illinois Testing Laboratories, Inc. 20
Interstate Machinery Co. 49
Iroquois Machinery Co. 48

J

Johnson & Sons Mchy. Co., Wm. C. 40
Jones Mch. Tool Co. Cincinnati 38

K

Kennard-Rafkin Mchry. Corp. 43
Klauber Machinery Co., E. L. 34

Index of Advertisers—Continued

L

Lewthwaite Machine Co., T. H.
Linley Brothers Co. .....
Lucas & Son, J. L. 36
Luma Electric Equipment Co.... 23

M

McDonald Machinery Company.. 39
Marr-Galbreath Machinery Co... 37
Martin Tool & Die Works, J. E. 21
Maxwell Co., F A. 12
Midwest Equipment Co. 41
Mid-West Machine Tool & Supply Co. 41
Miles Machinery Co. 44
Morey Machinery Co. Inc. 46

N

National Machine Tool Co. .....
Nicholson & Co., W. H. 24

O

O'Brien Machinery Co. 38
Osborne & Sexton Mchy. Co. 49
Oviatt & Co., D. C. 48

P

Procunier Safety Chuck Co. 16
Production Equipment Co.,.....
Progressive Tool & Cutter Co....

R

Reliance Machinery Sales Co. 38
Rentschler & Co., J. P. 40
Russell Machine Co. 48
Ridge Tool Co. 7

S

Scott-Bansbach Machinery Co.... 39
Segal Machinery Co. 38
Simmons Machine Tool Corp. 52
Stackbin Corp. 11
Steege Electric & Machinery Co.
Stegeman Machinery Co. 36
Strand & Co., N. A. 27
Strong, Carlisle & Hammond Co. 46
Sun Machinery Co. 52
Sundstrand Machine Tool Co. ..... Inside Front Cover

T

Thompson Grinder Co. 19

U

Used and Rebuilt Machinery.. 34 to 53

V

Victor Machinery Exchange Inc. 48
Victor Machinery Co. 51

W

Walls Sales Corporation 21
Walton Co. 27
Waters Machinery Co., C. H.... 34
West Penn Machinery Co. 35
Western Tool & Mfg. Co. .....
White Machinery Co., A. D.... 51
Whitney Metal Tool Co. 15
Wrigglesworth Machinery Co..... 39
Wilson, K. R. 6
Winterhoff Tool & Machine Co. 40
Wittek Manufacturing Co. 19
Wolnick Machinery Sales, H. F. 34

FOOTBURT

A Single Spindle Footburt Sipp Sensitive Drill

Made in three sizes of single and multiple spindle models

More holes with this machine

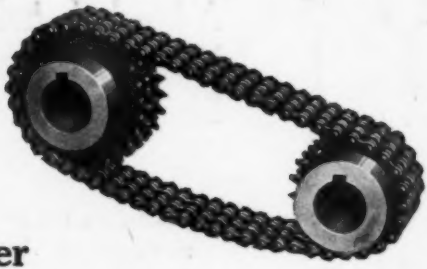
Why? Because you can change speeds in two seconds or belts in ten seconds—because the automatic idlers keep the belt pulling to capacity at all times—because the full ball bearing equipment and accurate machining gives a smooth, fast cut.

Write for No. 650 Folders

The Foote-Burt Company, Cleveland, O.

FOOTBURT

CULLMAN SPROCKETS



Over

45,000 In Stock

For

Roller, Block and Silent Chain

Special Sprockets Made to Order

Also

Speed Reducers—Lathe Drives

Write for Our NEW Catalogue

The Cullman Wheel Co.

1359 Altgeld Street, Chicago, Illinois